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ABSTRACT

The guide lists information about requirements, course offerings, financial aid, and personnel for 148 graduate departments of geography in the United States and Canada. The objective is to assist college and university departments in answering student inquiries concerning graduate training in geography. The guide is divided into two sections: the United States, and Canada. Arrangement is alphabetical by name of institution. Each entry includes the dates the department and the graduate program were founded, degrees offered, number of graduate students in residence and not in residence, chairman of the department, address and telephone of person to write for further information, and a list of theses and dissertations completed from July 1979 to June 1980. The entry also thoroughly describes the scope, emphasis, and academic requirements of each program, available research facilities and equipment, admission requirements, and possible financial aid. A listing of staff includes highest degree attained, year and granting institution, rank, and specialization. A staff directory and geographical index conclude the guide. (CK)

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Guide to Graduate Departments of Geography in the United States and Canada 1980-1981

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SO 012 829

With Theses and Dissertations Completed During 1979–1980

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PREFACE

This is the thirteenth edition of the *Guide to Graduate Departments of Geography in the United States and Canada* designed to assist college and university departments in answering the many inquiries received from students concerning graduate training in geography. It provides a comprehensive listing of information about requirements, course offerings, financial aid, and personnel for colleges and universities.

There are 73 institutions in the U.S. and Canada which offer a Ph.D. in geography; 71 of these are listed in the 1980–1981 *Guide*. Of the 101 institutions which award the Master's degree, 77 are included here. Out of a total of 174 graduate departments of geography in the U.S. and Canada, 148 are listed in the current edition of the *Guide*.

Recently completed dissertations and theses are listed once again under each graduate school program. This listing provides a permanent record of graduate research in geography. An explanation of the format appears on the page facing the first entry.

Participating department chairpersons and secretaries have cooperated admirably with the production editor, Teresa Mulloy, who is responsible for organizing and copy editing all material. We would like to express our appreciation to the many individuals who have made this *Guide* possible.

We hope that the *Guide* will continue to be used profitably by both students and faculty members in facilitating the entry of students into graduate programs of geography.

Patricia J. McWethy
Executive Director
Association of American Geographers

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DEGREES OFFERED (Some degrees may be in cooperating departments or among cooperating institutions.)

DEGREES GRANTED 7/1/79–6/30/80 (The number of theses and dissertations listed at the end of an entry may not match these figures if the department did not submit all titles, or if some Master's degrees were awarded on a non-thesis option.)

GRADUATE STUDENTS IN RESIDENCE

GRADUATE STUDENTS NOT IN RESIDENCE

CHAIR

FOR CATALOG AND FURTHER INFORMATION (Departmental address and telephone number.)

PROGRAMS AND RESEARCH FACILITIES

ADMISSION REQUIREMENTS, ACADEMIC PLAN, AND FINANCIAL AID

STAFF (Including highest degree, year and granting institution, rank and specializations.)

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80 (Doctoral dissertations first, followed by Master's theses in alphabetical order by author. Asterisk (*) identifies papers available on interlibrary loan; "Mf," indicates papers available on microfilm, followed by name of depository; e.g.: *Hill, N. Dale.* "Mountain Toponymy in the Basin and Range Province," 1979.* Mf., Univ. Microfilms.)

University of Akron

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1963 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/79–6/30/80: 3

GRADUATE STUDENTS IN RESIDENCE: 17
NOT IN RESIDENCE: 22

HEAD: Allen G. Noble

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Allen G. Noble, Chairman, Department of Geography, The University of Akron, Akron, Ohio 44325
Telephone (216) 375-7620

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts in Geography degree is designed for those graduate students who wish to pursue a traditionally oriented master's program in geography. A thesis is required.

The Master of Science in Geography is structured to fill the needs of those graduate students who wish to pursue a program strongly oriented toward quantitative analysis. A thesis is not written, but at least 9 semester hours of advanced statistics courses must be successfully completed.

Facilities include, in addition to air-conditioned general classrooms and faculty offices, a completely modern cartographic drawing laboratory, with adjoining darkroom and major equipment rooms, an urban analysis laboratory, a physical geography laboratory, graduate student offices, and a selected map, air photo and remote sensing research collection. Major equipment includes Kelsh stereo plotter, digital plotter, electronic calculators, key punch machine, remote computer terminal, overhead map enlarger, field plotters, ERTS zoom transferscope, three dimensional Perspektomat, headliner and varityper, industrial camera, vacuum frame, and map scale changers. A laboratory for cartographic and spatial analysis operates as a part of the Department. Academic emphasis is upon cartography, planning, urban geography, environmental resource planning, and Asian geography.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The academic plan requires four semesters. The plan consists of required technique courses in geography and electives in geography and related fields. Electives include traditional course work, seminars, advanced technique courses and research.

Graduate geography programs are open to qualified students with either an undergraduate major in geography or a major acceptable to the department. Students with inadequate background in geography will be expected to remedy these deficiencies. No foreign language is required for the degree.

Grants are available in the form of teaching and research assistantships.

The Department operates an urban planning internship program with local planning agencies. Interns are paid an amount equivalent to that of teaching assistants (plus compensation for fees) and they work as planners gaining experience as well as receiving academic credit for that experience. Loan facilities are also available.

The national offices of the Pioneer America Society are housed in the Department. Publications produced in the Department include *Ohio Geographers: Recent Research Themes* and *Bulletin of Asian Geography*.

STAFF:

Frank Costa, Ph.D., Wisconsin-Madison, Associate Professor of Urban Studies and Geography—urban, regional and resource planning

Ashok Dutt, Ph.D., Patna (India), Professor of Geography and of Urban Studies—urban, regional and urban planning, South Asia, Southeast Asia

Margaret Geib, B.A., B.S., Kent State, Department Cartographer

Lathardus Goggins, Ph.D., Saint Johns, Assistant Professor—Africa, recreation, Anglo-America, climatology

Edward W. Hanten, Ph.D., Pittsburgh, Professor and Director of the Center for Urban Studies—urban, industrial location, regional methodology

Vern Harnapp, Ph.D., Kansas, Associate Professor—physical, Latin America, remote sensing, educational techniques

Albert Korsok, Ph.D., Illinois, Associate Professor—Europe, Soviet Union, economic, history of geographic thought

Laurence Ma, Ph.D., Michigan, Associate Professor—East Asia, cultural, political

John Mulhauser, J.D., Akron, Associate Professor—economic, Anglo-America, cartography, remote sensing

Thomas Nash, Ph.D., Kent State, Associate Professor and Director of the Urban Planning Internship Program—planning, climatology, cartography

Allen G. Noble, Ph.D., Illinois, Professor, Head of the Department—South Asia, cultural, settlement landscape

Deborah Phillips, M.A., Georgia, Supervisor, Laboratory for Cartographic and Spatial Analysis

Jack Utano, Ph.D. candidate, SUNY Buffalo, Instructor—quantitative methods, computer cartography, crime studies

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Ekechuku, Godwin. "The Pattern of the Elderly in the City of Cleveland, Ohio 1940–1970," 1980.

Murray, Robert L. "A Geographic Analysis of Three Approaches for Classifying Prime Agricultural Land," 1980.

Venugopal, G. "Land Values and Land Uses in Madras City: A Study of Correlates and Spatial Patterns," 1980.

University of Alabama

DEPARTMENT OF GEOLOGY AND GEOGRAPHY

DATE FOUNDED: 1903 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.S.

GRANTED 7/1/79-6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 6
NOT IN RESIDENCE: 3

CHAIRMAN: Travis H. Hughes

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor H. D. Hays, PO Box 1945, University, Alabama 35486
Telephone (205) 348-5095

PROGRAMS AND RESEARCH FACILITIES: The graduate program in Geography is strongly committed to applied geography and to the fields of Regional and Urban Planning. Research and teaching focus on land use analysis, remote sensing, computer cartography, and energy and environmental issues. Recent publications include a state atlas, a computer based map abstract series, a land use-mineral rights ownership map series, and land suitability and land use activity surveys for various parts of the southeast.

The program is closely allied with various city and regional planning agencies in the state and many University of Alabama graduate students are employed by these agencies on a part-time basis or on internships. The Department is equipped for field work and laboratory studies. Facilities include a modern cartographic lab with map-o-graph and zoom transferscope, darkroom, U.S.G.S. map library, weather station, and aerial photo library. The Department is particularly well endowed with computer assets such as a HP 9845A micro-computer W/64 K bytes RAM, two cassette tape drives, internal thermal printer and CRT graphics system. This is linked to a TALOS 648 digitizer with 36" x 48" digitizing area and SMART option, and to a Houston Instruments DP-1-5 11" x 17" digital plotter. The Department has easy access to a UNIVAC 1100/61 time share computer system with a megaword of storage, to a Tektronix 4051 graphics station with digitizer, digital plotter, flexible disk storage, and to a ZETA 6000 series off-line 36" drum, four pen plotter.

Area studies remain a prominent part of the program, offering detailed physical and cultural analysis of Latin America, Soviet Union, Europe and other foreign regions. University graduates, through their academic training, are well prepared for work in the Foreign Service, C.I.A., D.I.A., and other federal agencies.

The graduate program in Geography is designed to include a thesis or a non-thesis track. Under the thesis track the student has considerable latitude to design a program to fit specific needs. The non-thesis track requires a rather strict conformity to specified guidelines. All entering students must specify one of the two tracks during the first semester of academic work. Students selecting the non-thesis track may

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select one of the following concentrations: Urban Systems Analysis and Management, Natural Systems Analysis and Management, Cultural Systems Analysis and Management, or Foreign Area Analysis.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. The academic program requires the completion of at least 24 semester hours with at least 12 hours in courses numbered 500 or above. A thesis, for which six semester hours is granted, is required. The program consists of required technique courses in geography and electives in geography and related fields. The Certificate in Urban and Regional Planning, an option, includes required courses in political science (public administration) and economics.

The graduate geography program is open to qualified students with either an undergraduate major in geography or a major acceptable to the department. A combined score of at least 1000 on the aptitude portions of the GRE and an undergraduate B average are required for unconditional admission. Students may be admitted with less than 1000 GRE on a conditional basis dependent on their grades in geography.

Teaching and research assistantships starting at $3700 for the academic year are regularly granted to well-qualified students. Paid internships are also available with local and regional planning agencies or with the Geological Survey of Alabama. Out-of-state tuition is waived for departmental assistants.

STAFF:

H. Donald Hays, M.A., Michigan, Professor and Director of the Urban and Regional Planning Program—microclimatology, land use, planning

W. Gary Hooks, Ph.D., North Carolina, Professor—geomorphology, general geology

Travis H. Hughes, Ph.D., Colorado, Professor—environmental geology

Frank D. Huttlinger, M.S., Pennsylvania State, Assistant Professor—cartography, air photo interpretation, Latin American studies

Neal G. Lineback, Ph.D., Tennessee, Professor—urban, economic, computer geography, geographical inventories

John Nichols, M.A., Miami-Ohio, Temporary Instructor—quantitative methods, computer mapping

Jeffrey P. Richetto, Ph.D., Ohio State, Assistant Professor—social, economic

David C. Weaver, Ph.D., Florida, Associate Professor—urban, planning, economic

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Welch, Stine Mitchell. "The Effect of Great Britain's Entry Into the European Economic Community on New Zealand's Foreign Trade," 1980.

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Appalachian State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A., M.A. for teachers

GRANTED 7/1/79-6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 7
NOT IN RESIDENCE: 6

CHAIRPERSON: William Imperatore

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Ole Gade, Chairperson, Graduate Committee, Department of Geography, Appalachian State University, Boone, North Carolina 28608
Telephone (704) 262-3001

PROGRAMS AND RESEARCH FACILITIES: The M.A. in Geography allows emphasis on areas of interest varying from physical and cultural geography to urban/rural planning and recreational site development. Beyond a set of core courses, lecture, independent study, internships and special topics, courses are available with which an individualized program of study can be designed. Also, two tracks in the M.A. for teachers program allow preparation for teaching in the junior/community college or at the secondary school level.

The geography department occupies the fourth floor of a modern science facility adjacent to the main library and contains well equipped cartographic/photo interpretation/remote sensing lab, map library and dark room facilities. A programmable calculator, microprocessing equipment, and a computer terminal, supplemental to the nearby university computer facility, are available within the department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Graduate geography programs are open to qualified students with an undergraduate major in geography or a major approved by the graduate committee. A number of assistantships are available. Stipends range from $1600-$3600 per year with out-of-state tuition waived in selected cases. Internships in regional, urban and environmental analysis and planning are normally available during the internship period.

STAFF:

Terry E. Epperson, Ph.D., Tennessee, 1960, Professor—economic, Asia, Southern Appalachia

Ole Gade, Ph.D., Michigan State, 1972, Professor—migration, urban and regional development and planning, geographic theory, quantitative methods, Europe

William Imperatore, Ed.D., Georgia, 1970, Professor and Chairperson—geographic education, meteorology, physical

Robert E. Reiman, Ph.D., Florida State, 1964, Professor and University Coordinator of Long Range Planning, AIP—environmental analysis, planning theory, Caribbean, Soviet Union

H. Daniel Stillwell, Ph.D., Michigan State, 1961, Professor—physical, biogeography, remote sensing, field techniques, cartography, recreational land use

Roger A. Winsor, Ph.D., Illinois, 1975, Associate Professor—historical, environmental perception, behavioral, political, research methods

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Murray, Van Brocklin. "A New Downtown in Winston-Salem, N.C.: A Case Study of the Intermediate Commercial District," 1979.

Arizona State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1923 GRADUATE PROGRAM FOUNDED: 1961

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 13 M.A., 5 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 23 M.A. 10 Ph.D.
NOT IN RESIDENCE: 9 M.A. 9 Ph.D.

CHAIRMAN: W. Donald McTaggart

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. W. Donald McTaggart, Department of Geography, Arizona State University, Tempe, Arizona 85281
Telephone (602) 965-7533

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts degree requires 30 semester hours; a thesis or research project is required. There is a program designed for: (1) those students planning to continue their graduate career at the Ph.D. level; (2) those students interested in teaching careers at the high school or two-year college levels; (3) those students interested in careers in urban and regional planning or environmental evaluation; and (4) those students wishing to specialize in spatial analysis of land use. Every effort is made to arrange each student's program to fit individual interests, needs, and career objectives. The Ph.D. program emphasizes resource, environmental, and urban geography, and is tailored to student needs.

The large number of faculty and their diverse training provide for a wide range of course offerings and research guidance to include nearly all systematic or regional interests on the part of students. Faculty interest, combined with the location of the University in the greater Phoenix metropolitan area in southwestern United States, provides an ideal laboratory for urban geography, urban climatology, arid land research, and cultural geography. Northern Mexico and the Western mountains are within easy reach for field research.

The department moved into a new building last year. The University has an excellent research library.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Academic plan—semester system. Admission requirements for M.A.—undergraduate major in geography or 15 semester hours in geography and related fields, with a B average for the last two academic years; for Ph.D.—Master's degree in geography or related field or equivalent, and B average at the graduate level. GRE scores are also used in determining admittance.

Teaching assistantships, university scholarships, and other awards are available. Stipends range from $4,050 to $4,350 for the academic year. Out-of-state tuition is waived for graduate assistants and associates.

STAFF:

William J. Acker, Ph.D., Syracuse, 1969, Associate Professor—world regional, economic, military, urban, Europe

Frank T. Aldrich, Ph.D., Oregon State, 1972, Associate Professor—biogeography, cartography/computer graphics, field methodology, remote sensing

Anthony J. Brazel, Ph.D., Michigan, 1972, Associate Professor and Director, Laboratory of Climatology—physical, climatology, microclimatology, Alpine

Malcolm L. Comeaux, Ph.D., Louisiana State, 1969, Associate Professor—cultural, historical, history of geographic thought, Southwestern United States

Robert W. Durrenberger, Ph.D., UCLA, 1955, Professor—arid lands, climatology, water resources, solar radiation

Melvin J. Frost, Ph.D., Florida, 1964, Assistant Professor—agricultural, physical, Latin America

Patricia Gober, Ph.D., Ohio State, 1975, Associate Professor—population, regional economic development, urban, geography of the elderly

William L. Graf, Ph.D., Wisconsin, 1974, Associate Professor—fluvial geomorphology, man/environment, arid lands, Alpine geomorphology

L. Lloyd Haring, Ph.D., Iowa, 1959, Professor—political, social, research methods

Ray Henkel, Ph.D., Wisconsin, 1971, Assistant Professor—agricultural, Latin America, Africa

John F. Lounsbury, Ph.D., Northwestern, 1951, Professor and Director of the Center for Environmental Studies—field methodology, land use, research methods, physical, Caribbean America

Melvin G. Marcus, Ph.D., Chicago, 1963, Professor—climatology, environmental, glaciology, Alpine and Polar regions

W. Donald McTaggart, Ph.D., Australian National, 1963, Professor and Chairman—underdeveloped nations, urban, Southeast Asia

Robert C. Mings, Ph.D., Ohio State, 1966, Associate Professor—recreation, tourism, economic, Latin America

L. Mayland Parker, Ph.D., Cornell, 1955, Professor—cultural, agricultural, rural economic and community development

Martin J. Pasqualetti, Ph.D., UC, Riverside, 1977, Assistant Professor—energy, energy-environment, cultural, Mexico, Anglo-America

Charles S. Sargent, Jr., Ph.D., UC, Berkeley, 1971, Associate Professor—urban, historical, Europe, world cities

Guido G. Weigend, Ph.D., Chicago, 1949, Professor and Dean of the College of Liberal Arts—port and ocean transportation, political, Europe and Soviet Union

Leo E. Zonn, Ph.D., Wisconsin-Milwaukee, 1975, Associate Professor—social and behavioral, urban, geography of the elderly

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Barnett, Albert P. "Residential Flood Irrigation and Microclimate in Phoenix, Arizona," 1980.*

Hepner, George F. "A Directed Graph Approach to Rural-Urban Fringe Land Use Conversion," 1980.*

Hyers, Albert D. "Mesoscale Relationship of Talus and Insolation San Juan Mountains, Colorado," 1980.*

Thomas, Sharon M. "A Spatial Analysis of the Perceptions of Airport Hazards by Land Users in the Vicinity of Phoenix, Arizona Sky Harbor International Airport," 1980.*

Williams, Harris E. "An Analysis of Precipitation Patterns and Trends in the North American Desert Region," 1980.*

Master's:

Jeffrey, Charles Frederick. "A Historical Geography of the Heliograph in the Department of Arizona," 1980.*

University of Arizona

DEPARTMENT OF GEOGRAPHY AND REGIONAL DEVELOPMENT

DATE FOUNDED: 1961 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A., M.Ed., Ph.D.

GRANTED 7/1/79–6/30/80: 2 M.A.

GRADUATE STUDENTS IN RESIDENCE: 9 M.A. 4 Ph.D.
NOT IN RESIDENCE: 4 M.A. 2 Ph.D.

HEAD: Richard W. Reeves

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Richard W. Reeves, Department of Geography and Regional Development, University of Arizona, Tucson, Arizona 85721
Telephone (602) 884–1040, 1526

PROGRAMS AND RESEARCH FACILITIES: Candidates for the Master of Arts degree must earn 30 units of graduate credit, not more than 6 of which may be awarded for an optional thesis. Four specific courses are required: The Summer

Field Camp, Advanced Physical Geography, Advanced Cultural Geography, and History of Geographic Thought. The Master of Education degree with a major in geography requires at least 32 units in Geography and in Education, but no thesis.

The Ph.D. requires completion of the M.A. requirements, specialization in one topical and one regional area, two foreign languages or one foreign language plus acceptable quantitative skills, and an original dissertation.

Fields of special emphasis include cultural-historical geography, economic geography and regional development, some aspects of physical geography, urban geography, Anglo-America, Arid Lands, and Latin America.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system; Field Camp offered in summer only. GRE scores, Aptitude and Advanced, required for admission. Several assistantships with stipends beginning at $4000 (one-half time) and including remission of out-of-state tuition are available to qualified applicants. Applications for assistantships must be complete by February 15.

STAFF:

D. Robert Altschul, Ph.D., Illinois, 1966, Associate Professor—rural settlement, physical, Africa

Michael E. Bonine, Ph.D., Texas, 1975, Assistant Professor of Oriental Studies—Middle East, Middle Eastern urbanism

Lay J. Gibson, Ph.D., UCLA, 1968, Professor—economic, urban, regional development

Melvin E. Hecht, Ph.D., Kansas, 1962, Professor—U.S. historical-cultural, the Southwest

Conrad T. Moore, Ph.D., UCLA, 1972, Lecturer—cultural, historical, American West

David A. Mouat, Ph.D., Oregon State, 1974, Assistant Professor of Arid Lands Studies—remote sensing, geomorphology, plant ecology

Gordon F. Mulligan, Ph.D., British Columbia, 1977, Assistant Professor—economic, urban

Leland R. Pederson, Ph.D., UC, Berkeley, 1965, Professor—historical, cultural, Latin America

David A. Plane, Ph.D. candidate, Pennsylvania, Assistant Professor—migration, transportation

Richard W. Reeves, Ph.D., UCLA, 1970, Professor—geomorphology, arid lands, cartography

Thomas F. Saarinen, Ph.D., Chicago, 1966, Professor—perception of environment, resource management, urban

Leland F. Smith, M.A., Portland State, 1974, Lecturer—regional development

Robert E. Dickinson, Professor Emeritus

Dan Stanislawski, Professor Emeritus

Andrew W. Wilson, Professor Emeritus

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Nasrallah, Hasan Ali. "Changing Visibility in Kuwait: 1963–1978," 1980.

University of Arkansas, Fayetteville

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1948 GRADUATE PROGRAM FOUNDED: 1949

DEGREES OFFERED: M.A.

GRANTED 7/1/79-6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 8
NOT IN RESIDENCE: 5

CHAIRPERSON: John G. Hehr

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. John G. Hehr, Chairperson, Department of Geography, University of Arkansas, Fayetteville, Arkansas 72701
Telephone (501) 575-3159

PROGRAMS AND RESEARCH FACILITIES: The department offers a broad and flexible curriculum of instruction and research in both topical and regional geography with work available in allied fields. The University Library houses a fine collection of geography materials, including major foreign periodicals, and northwest Arkansas and adjacent areas offer many outstanding opportunities for field work. Each student's program reflects his or her background, interests, and needs. Narrow specialization is not emphasized at the Master's level, but the student is expected to broaden and deepen the understanding of geographical concepts and methodology. A thesis and 24 semester hours of course work are minimum requirements for the degree.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. To enter Graduate School: an undergraduate degree with minimum of 2.5 grade point; to enter departmental program: minimum of 18 hours in geography and allied fields. Quarter- and half-time assistantships are available.

STAFF IN GEOGRAPHY:

James R. Allen, Ph.D., Rutgers, 1973, Assistant Professor—coastal and fluvial geomorphology, aerial photo interpretation

Thomas O. Graff, Ph.D., Kansas, 1973, Associate Professor—population, location theory, quantitative methods

John G. Hehr, Ph.D., Michigan State, 1971, Assistant Professor—meteorology, climatology, Latin America

O. Orland Maxfield, Ph.D., Ohio State, 1963, Professor—geographic thought, natural resources, urban, historical U.S.

Earl M. Neel, Ph.D., Tennessee, 1963, Assistant Professor—cultural, manufacturing, Monsoon Asia

Thomas W. Scott, Ph.D., Illinois, 1957, Professor—environmental problems, transportation, Africa, Europe, Middle East

TITLES OF THESES COMPLETED 7/1/79-6/30/80:
Master's:
Matthews, James A. "A Geographical Analysis of the Blue Ridge Wildlife Management Area. Chattahoochee National Forest," 1980.*

Ball State University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1955

DEGREES OFFERED: M.A., M.A.Ed., M.S.

GRANTED 7/1/79-6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 18

CHAIRMAN: Edward E. Lyon

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Department of Geography and Geology, Ball State University, Muncie, Indiana 47306—for Department information. Catalog—Graduate information: Graduate School, Ball State University.
Telephone (317) 285-6275

PROGRAMS AND RESEARCH FACILITIES: Graduate work through the Masters degree in Geography, Geology and Earth Science (M.A. or M.A.Ed., major 24-45 quarter hours) (M.S. in Geology). A cognate (minor) is available in geography or earth science on the doctorate program in Education. The Department also participates in the graduate natural resources program. Special research and work facilities include cartography and aerial photo, remote sensing, earth science, physical geography and geology laboratories, a fully equipped weather station, map rooms, and a materials resource center. The University computer is available to departmental research.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Admission requirements comply with those of the University; forms obtainable from the Office of Admissions. Autumn, Winter, and Spring quarters, and two summer terms of five weeks each. Graduate assistantships $3100 per academic year available.

STAFF:
George F. Beatty, Ph.D., Illinois, 1958, Professor—land utilization, agricultural-rural, Asia
Robert L. Carmin, Ph.D., Chicago, 1953, Professor—frontier settlement, Latin America
Lowell I. Dillon, Ph.D., Indiana, 1960, Professor—economic, Australia, Indiana

Thomas P. Grimes, Ph.D., Kentucky, 1972, Associate Professor—physical, industrial location, Asia

Barry N. Haack, Ph.D., Michigan, 1977, Assistant Professor—remote sensing, physical

Stephen A. Justham, Ph.D., Illinois, 1974, Associate Professor—meteorology-climatology, geomorphology

Henry E. Kane, Ph.D., UCLA, 1965, Professor—geomorphology, oceanography

Edward E. Lyon, Ph.D., Ohio State, 1972, Professor—education geography, physical, Anglo-America, geomorphology

Tom L. Martinson, Ph.D., Kansas, 1969, Professor—cultural, bibliography, Central America

R. William Orr, Ph.D., Indiana, 1967, Professor—invertebrate paleontology, stratigraphy

Raymond A. Peterson, Ph.D., Florida, 1967, Associate Professor—agricultural land use, U.S. and Canada, remote sensing

Walter H. Pierce, M.S., Colorado School of Mines, 1969, Assistant Professor—physical stratigraphy

Harlan H. Roepke, Ph.D., Texas, 1970, Professor—field studies, sedimentology-mineralogy

Alan C. Samuelson, Ph.D., Pennsylvania State, 1972, Professor—structural geology, geophysics

Meera Schoen, Ph.D., London, 1951, Associate Professor—urban, cultural, U.S.S.R.

Gerald R. Showalter, Ph.D., Illinois, 1973, Associate Professor—thematic cartography, agricultural development

Michael E. Sullivan, Ph.D., Illinois, 1972, Associate Professor—industrial, Latin America

David L. Wheeler, Ph.D., Michigan, 1962, Professor and Dean of the Graduate School—land utilization, historical geography

Boston University

DEPARTMENT OF GEOGRAPHY

GRADUATE PROGRAM FOUNDED: 1922

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 4 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 25

CHAIRMAN: T. R. Lakshmanan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. T. R. Lakshmanan, Department of Geography, Boston University, 48 Cummington Street, Boston, Massachusetts 02215
Telephone (617) 353-2525

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers a broad program that combines strong basic training in traditional theory, quantitative techniques and policy studies into a robust program in the discipline. The training in policy analysis combined with analytical rigor provides the geographer flexibility for choosing a career in teaching, government, research institutes, consulting firms, or international organizations.

In addition to providing basic training in core subjects and traditional branches of the discipline, the Department places special emphasis in four fields: urban, economic, and regional analysis and policy; environmental and energy analysis and policy; geography of development; and cartography. The focus on these fields reflects the Department's strong commitment to analytical tools in geography that would further policy and management in fields of national and international concern. These fields reflect strong research interests of the faculty and each special field has a rich set of course offerings. Opportunities exist for research in applied projects as well, and faculty have been engaged in research sponsored by such agencies as the National Science Foundation, the U.S. Department of Energy, U.S. Environmental Protection Agency, U.S. Health, Education, and Welfare Department, First National Bank of Boston, World Bank, United Nations and the Attorney General of Massachusetts, Planning Research Corp. and Urban Systems Research.

Interdisciplinary opportunities at Boston University are available at the Center for Energy and Environmental Studies, African Studies Center, Center for Latin American Development Studies, Center for Asian Studies, Energy Study Center, American and New England Studies Program, Afro-American Studies, Center for Applied Social Science, and Urban and Regional Planning Program.

University and departmental facilities open to the student include multiple terminals for the Computation Center's IBM 370/158, a cartographic laboratory, computer mapping and digitizing facilities, map library and meteorological station. Extensive library and museum resources are accessible from the University's central location in Metropolitan Boston. The area as a whole provides outstanding research opportunities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Boston University is on the semester system. Prospective graduate students should write the Graduate Advisor for applications and instructions for submitting complete credentials. The Graduate Record Examination is requested of all applicants. Financial aid includes Teaching Fellowships of $3,500 plus tuition, Research Fellowships providing stipend and tuition and Graduate Assistantships providing full tuition.

FACULTY:

G. Bannister, Ph.D., Toronto, 1974, Associate Professor and Dean of College of Liberal Arts—economic, urban location theory, regional policy

P. J. Bartlein, Ph.D., Wisconsin, 1978, Assistant Professor—climatology, quantitative methods, water resources

R. B. Batchelder, Ph.D., Northwestern, 1951, Professor—climatology, physical oceanography, air quality

A. C. C. Best, Ph.D., Michigan State, 1965, Associate Professor—political, population, Africa

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A. J. Carbonell, Ph.D., Johns Hopkins, 1979, Assistant Professor—urban geography, environmental systems

L. Chatterjee, Ph.D., Johns Hopkins, 1973, Associate Professor of Geography and Urban Affairs—urbanization and environmental quality, housing markets and public policy, urban

T. F. Glick, Ph.D., Harvard, 1968, Associate Professor of Geography and History—environmental history, historical geography (on leave 1979-80)

T. M. Kontuly, Ph.D., Pennsylvania, 1978, Assistant Professor—economic, urban, population

T. R. Lakshmanan, Ph.D., Ohio State, 1965, Professor and Chairman, Director, Center for Energy and Environmental Studies—urbanization and environmental quality, regional policy, Third World

G. K. Lewis, Ph.D., Harvard, 1956, Professor—urban, New England, Third World

R. C. Mayfield, Ph.D., Washington, 1961, Professor and Vice President for External Programs—cultural, economic development, South Asia

P. F. McDowell, Ph.D., Wisconsin, 1979, Assistant Professor—geomorphology, fluvial processes, soil geography and biogeography

J. M. Olson, Ph.D., Wisconsin, 1970, Associate Professor—quantitative and theoretical cartography, automatic pattern recognition, automated mapping

J. Osleeb, Ph.D., SUNY Buffalo, 1974, Associate Professor—economic, energy, regional policy

S. J. Ratick, Ph.D., Johns Hopkins, 1979, Associate Professor, Associate Director, Center for Energy and Environmental Studies—environmental and resource systems, energy policy, methodology

ADJUNCT FACULTY:

Brian J. L. Berry, Ph.D., Washington, 1958, Adjunct Professor, Williams Professor of City and Regional Planning, Harvard University—urbanization, quantitative analysis, regional planning and environmental analysis

F. J. Mogolesko, Ph.D., NYU, 1978, Adjunct Assistant Professor and Environmental Sciences Group Leader, Nuclear Engineering Department, Boston Edison Company—meteorology, climatology, physical oceanography

E. Tong, M.S., Texas A&M, 1965, Adjunct Associate Professor, Principal Scientist and Manager of Environmental Technology, Applications Group of Tednedron—regional air pollution, industrial and regional air quality control, atmospheric diffusion models

TITLES OF DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Dougherty, Percy. "The Thermogeographic Analysis of Ground Water in the Mogathy-Raritan Formation, Camden County, New Jersey," 1980.

Massey, David R. "International Labor Migration and its Effects on Rural Development in Botswana," 1980.

Bowling Green State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1952 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A., M.A.T.

GRANTED 7/1/79–6/30/80: 5

GRADUATE STUDENTS IN RESIDENCE: 14
NOT IN RESIDENCE: 6

CHAIRMAN: Joseph G. Spinelli

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Adviser, Department of Geography, Bowling Green State University, Bowling Green, Ohio 43403
Telephone (419) 372-2925

PROGRAMS AND RESEARCH FACILITIES: The Department is well equipped with a cartography laboratory which includes a NuArc Camera, Map-O-Graph, Facsimile Machine, Bruning Copier, darkroom facilities, and a Varitype machine. The Department is also a depository for the Army Map Service, U.S. Geological Survey, and the National Ocean Survey-Great Lakes Series. Students and faculty have access to the IBM 360–75 and Univac 1110 computers. The main emphases in our graduate work are Urban-Economic, Physical Geography, Cartography, and Cultural-Population, all with an applied orientation. An internship/cooperative education program provides practical experience.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Quarter System. Maximum stipend of $3550 for graduate assistantships with tuition paid.

STAFF:

Thomas D. Anderson, Ph.D., Nebraska, 1966, Professor—cultural, field methods, land use

Joseph C. Buford, Ph.D., UCLA, 1962, Professor—political, Europe

Alvar W. Carlson, Ph.D., Minnesota, 1970, Professor—rural development, recreation, ethnicity

Stephen S. Chang, Ph.D., UCLA, 1971, Associate Professor—cultural, conservation, resources/regional development

Paul V. Crawford, Ph.D., Kansas, 1969, Professor—cartography, geomorphology, soils

Ralph W. Frank, Ph.D., Northwestern, 1952, Professor—economic, Asia, education

Glen R. Frey, Ph.D., Wisconsin-Milwaukee, 1972, Associate Professor—climatology, meteorology, hydrology

Jeffrey J. Gordon, Ph.D., Syracuse, 1978, Assistant Professor—cultural, economic

John Hiltner, Ph.D., Northwestern, 1958, Professor—urban, Middle East, gerontology

John W. Kunstmann, Ph.D., Northwestern, 1964, Associate Professor—physical, air photo, remote sensing

Mohan N. Shrestha, Ph.D., Iowa, 1969, Associate Professor—economic, quantitative analysis, computer mapping

Bruce W. Smith, Ph.D., Illinois, 1970, Professor—industrial location, gerontology, regional development

Joseph G. Spinelli, Ph.D., Florida, 1973, Associate Professor—population, Latin America

(One additional replacement is forthcoming for 1980–81.)

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

French, Richard. "The Virginia Military District as a Distinct Political Entity Within Ohio, As Measured By Presidential Elections, 1804–1976," 1979.

Lind, Diann. "The Distribution of Vegetation Relative to Substrates on Drummond Island, Michigan," 1979.

Simmons, William. "A Multi-Factor Uniform Regionalization of Appalachian Counties Based On Selected Demographic Characteristics," 1980.

Thompson, Kimberly. "Factors Influencing the Expansion of Electric Utilities' Area Development Operations," 1979.

Wineberg, Howard. "The Relationship Between Infant Mortality and Socioeconomic Status: A Study of Cities in the East-North-Central Region of the United States, 1970," 1980.

California State University, Chico

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 8

GRADUATE STUDENTS IN RESIDENCE: 8
NOT IN RESIDENCE: 0

CHAIRMAN: Professor Bruce E. Bechtol

FOR FURTHER INFORMATION WRITE TO: Graduate Advisor, Department of Geography, California State University-Chico, Chico, California 95929
Telephone (916) 895–5285

PROGRAMS AND RESEARCH FACILITIES: The master of arts program in geography is intended to broaden the training and to prepare qualified students for:

(1) public schools and community college teaching in geography and social science; (2) advanced academic work preparatory to the doctorate at other institutions; and (3) employment in public service and the private sector where an advanced degree is desirable.

Students may concentrate their studies in either physical or cultural geography and/or Planning and Development of the Rural Environment.

The department offers excellent facilities for study in geography. It occupies most of the fifth floor of a seven-story, air-conditioned, classroom-office building (Butte Hall). The facilities include the Geographical Services Office which houses an extensive collection of maps, technical equipment and slides which are available for student use.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: California State University, Chico operates two semesters and summer sessions. Applicants wishing to pursue a master's degree must have an undergraduate grade point average of at least 2.75 in the last sixty semester units and 3.00 in the last thirty semester units, and a grade point average of at least 3.00 in all post-baccalaureate graduate level coursework taken.

The entering geography student must, in addition, possess a baccalaureate degree in geography. If undergraduate work is deficient, the applicant will be required to take courses prescribed by the graduate committee.

The graduate program in geography normally offers two or three assistantships per academic year. The assistantships are granted to qualified graduate students to teach and do research in the department. Teaching is generally in laboratories in air photo interpretation. Research is generally related to various department and faculty study-related requirements. Awards are made on a competitive basis.

STAFF:

Bruce E. Bechtol, Ph.D., Oregon, 1969, Professor and Chairman—man and environment, field geography, Latin America, spatial concepts

William F. Collins, Ph.D., Cincinnati, 1974, Associate Professor—urban, quantitative, location analysis, planning

Richard Haiman, Ph.D., UCLA, 1973, Professor—physical, biogeography, field geography, Latin America

Ladd L. Johnson, Ph.D., UCLA, 1970, Professor—cultural, political, population, water resources development, Africa, Asia

Arthur E. Karinen, Ph.D., Maryland, 1959, Professor—cartography, population, historical, recreation and tourism

David W. Lantis, Ph.D., Ohio State, 1950, Professor—physical, California, Anglo-America, Europe

Gene E. Martin, Ph.D., Syracuse, 1955, Professor—cultural, field methods, Latin America (Coordinator, Latin American Studies Program)

Ralph F. Meuter, Ph.D., Oklahoma, 1970, Professor—economic, location analysis, urban, regional and community planning (Dean, University Continuing Education)

Louis J. Mihalyi, Ph.D., UCLA, 1969, Professor—economic, political, sub-Saharan Africa, aerial photo interpretation, forestry

Edward L. Myles, Ph.D., Michigan, 1973, Associate Professor—urban, economic, planning, Australia, Anglo-America, spatial concepts

Frank Seawall, Ph.D., Pennsylvania State, 1957, Professor—physical, transportation, urban, Anglo-America

Margaret Trussell, Ph.D., Oregon, 1969, Professor—man and environment, historical, agricultural

Jerry R. Williams, Ph.D., Florida, 1969, Professor—cultural, economic, Latin America, tropics

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Bjorklund, Richard. "American Samoa: A Preliminary Environmental Survey," 1980.

Centrella, Maria. "Community Assistance Manual Socioeconomic Impact Management: A Guide for Planning," 1980.

Fleharty, Bartley. "A Method of Evaluation for Energy Sources," 1980.

Kilbourne, David. "A Manual for Emerging Downtown Improvement Associations," 1980.

Knauft, Charles. "California Salmon and Water," 1980.

Nelson, James. "The Assessment and Protection of Rare and Endangered Plants of Butte County, California," 1979.

Nelson, Warren. "Hamilton Field and Rafael Village Detachment from the Novato Fire Protection District: A Local Agency Formation Commission Staff Report," "Marine Resources Conservation District Detachment: A Local Agency Formation Commission Staff Report," "A Contrast of City and Special District Annexation Procedures and Presentation of Special District Reorganization Procedure," 1980 (three papers).

Radabaugh, Mark. "Considerations Related to Mobile Home Development in Siskiyou County, California," "Land Abuse of the Oxnard Plain—A Study of One of California's Most Productive Agricultural Sub-Regions," "A Report on Transitions Around Tiquisate and Nueva Concepción, Guatemala," 1979 (three papers).

California State University, Fresno

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1925 GRADUATE PROGRAM FOUNDED: 1964

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 7

GRADUATE STUDENTS IN RESIDENCE: 28
NOT IN RESIDENCE: 12

CHAIRMAN: Stanley F. Norsworthy

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Department of Geography, California State University, Fresno, Fresno, California 93740
Telephone (209) 487-2797

PROGRAMS AND RESEARCH FACILITIES: The Geography Department is authorized to grant the Master of Arts Degree with a major in Geography. The student may select one of two programs: Plan A (thesis) and Plan B (non-thesis). Plan A is designed to provide a thorough preparation leading to careers in research and scholarly work or in college or university teaching. Plan B is designed for those who will profit from a broader range of knowledge in geography rather than a more specific research interest. The objective of both plans is to provide a thorough preparation in general geography; experience in conducting independent research; and an opportunity for limited specialization. The department requires a foreign language for Plan A only. Cartography, field geography and quantitative techniques are prerequisites to Plan A.

The department is housed in the New Science Building. Excellent facilities are available for student use.

MASTER OF ARTS DEGREE IN GEOGRAPHY (THESIS PLAN)

1. Required courses: 12 units—Research and Writing (3); Geographic Thought (3); Thesis (6)
2. Select from the following seminars, including one physical, one human systematic, and one regional seminar, 9 units appropriate to program objective—Seminars: economic; human; physical; urban; selected regions.
3. Electives in geography: 3-6 units.
4. Electives outside of geography: 3-6 units.
5. Total required: 30 units.

MASTER OF ARTS DEGREE IN GEOGRAPHY (NON-THESIS PLAN)

1. Required courses: 6 units—Research and Writing (3); Geographic Thought (3).
2. Select 12 units from the following seminars including one physical, one human systematic, and one regional seminar—Seminars: economic; human; physical; selected regions.
3. Electives in geography: 6-9 units.
4. Electives outside of geography: 3-6 units.
5. Total required: 30 units.

In addition to the course requirements, applicants for the Master of Arts Degree must meet the entrance standards of the University and pass the department's qualifying examination. There will be a final written examination for non-thesis plan students and an oral thesis defense for thesis plan students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: CSU, Fresno operates on the semester system (plus summer session). The general graduate school admission requirements are described in the CSU, Fresno *Bulletin*. Various forms of financial aid are available to graduate students. The graduate assistantship application deadline is April 1.

STAFF:

Michael Biechler, Ph.D., Michigan State, 1970, Professor—agriculture, Latin America, population, natural resources

Chester F. Cole, Ph.D., Nebraska, 1951, Professor—political, historical

John A. Crosby, Ph.D., Washington, 1959, Professor—urban, map-air photo interpretation

Roger E. Ervin, Ph.D., Florida, 1954, Professor—Pacific world, soils

E. Frank Koller, Ph.D., Pennsylvania State, 1964, Professor—energy resources, Europe

James S. Kus, Ph.D., UCLA, 1972, Professor—cultural, Latin America

Robert E. Lee, Ph.D., UCLA, 1966, Professor—U.S.S.R., Africa, political

Charles G. Markham, Ph.D., UC, Berkeley, 1967, Professor Emeritus—climatology, Latin America, quantitative techniques

Richard C. Montgomery, Ph.D., Nebraska, 1962, Professor—landforms, environmental studies

Donald L. Morgan, Ph.D., UC, Davis, 1972, Professor—meteorology, hydrology, environmental studies

George N. Nasse, Ph.D., Michigan, 1960, Professor—field geography, Middle East

Stanley F. Norsworthy, Ph.D., UCLA, 1970, Professor and Chairman—arid-lands, Canada, plant geography

William F. Slusser, M.A., CSU, Northridge, 1968; M.S., Utah State, 1973, Equipment Technician—meteorology

Merrill M. Stuart, Ed.D., Teachers College, Columbia, 1968, Professor—economic, California

Jerry C. Towle, Ph.D., Oregon, 1974, Associate Professor—cultural, environmental studies

Paul Vander Meer, Ph.D., Michigan, 1973, Associate Professor—East Asia, cartography, land use

California State University, Fullerton

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1959 GRADUATE PROGRAM FOUNDED: 1967

DEGREES OFFERED: M.A.

GRANTED 7/1/79-6/30/80: 8

GRADUATE STUDENTS IN RESIDENCE: 13
NOT IN RESIDENCE: 7

CHAIR: Barbara Weightman

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Advisor, Department of Geography, California State University, Fullerton, California 92634
Telephone (714) 773-3161

PROGRAMS AND RESEARCH FACILITIES: The department offers a program designed primarily for students interested in educational, governmental, and commercial employment. Seminars and advanced courses include work in physical and human geography and frequently focus on themes related to environmental change and planning. Facilities in the computer center and the departmental cartographic laboratory make it possible to provide advanced work in photo-cartography, computer graphics, and quantitative analysis.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:
The current course of study requires about three semesters of full-time enrollment. Each student normally takes 12 hours of seminars, 3 hours of thesis research, additional advanced courses, and must satisfy a requirement in advanced techniques, for a total of 30 hours. The prerequisite consists of 18 semester hours of geography, reflecting balanced training in physical, human, regional, and technical courses. Approximately three technical assistantships are available.

STAFF:

Arthur D. Earick, Ph.D., Michigan, 1959, Professor—U.S. and Canada, travel, urban

H. Peter Eilers, Ph.D., Oregon State, 1975, Associate Professor—biogeography, coasts (on leave)

Wayne N. Engstrom, Ph.D., Wisconsin, 1971, Professor—geomorphology

Glenn George, Ph.D., California, 1972, Associate Professor—economic, quantitative

Gerald P. Hannes, Ph.D., Illinois, 1972, Associate Professor—climatology

Ronald A. Helin, Ph.D., UCLA, 1961, Professor—Europe, U.S.S.R.

William J. Ketteringham, Ph.D., UCLA, 1972, Associate Professor—Latin America, land use

Tso-Hwa Lee, Ph.D., Southern Illinois, Carbondale, 1973, Professor—cartography, quantitative

Bill Puzo, Ph.D., UCLA, 1972, Professor—Africa, political, travel

Gertrude M. Reith, Ph.D., Clark, 1963, Professor—California, environmental problems, travel

Imre Sutton, Ph.D., UCLA, 1964, Professor—conservation, law and environment

Barbara A. Weightman, Ph.D., Washington, 1972, Associate Professor and Chair—social, cultural, travel

Robert A. Young, Ph.D., Wisconsin, 1975, Assistant Professor—urban, planning (on leave)

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Ahlborn, William O. "Sierra Wall National Park," 1980.*

Charlton, Amelle. "Trabuco District, Cleveland National Forest: Public and Private Land Use Conflicts," 1980.*

Grant, James. "An Analysis of Seismic Effects Upon Man-Made Wood Frame Structures Relevant to Orange County Faults," 1980.*

Lucado, Pamela Ann. "Fiscal Impact Considerations for a Proposed Regional Shopping Center in the Santa Ana Canyon" and "A Case Analysis of Combining Land Use Planning and Economics," 1979.

Mussche, Julie. "Mountains: A Phenomenological Consideration," 1980.*

Shimer, Ronald. "Designation of Energy Impacted Areas as Required in the 'Power Plant and Industrial Fuel Act of 1978': An Analysis of Issues Surrounding Area Delimitation" and "A Test Case for Delimitation of Energy Impacted Areas," 1980.

Tokar-Hazlett, Patricia. "Orange County: Problems Encountered by the Visually Impaired When Using Public Transportation" and "Transportation and the Elderly in Garden Grove," 1979.

Utterberg, Edith. "Automobile Space in Fullerton, California" and "History and Development of Roads," 1979.

California State University, Hayward

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1963 GRADUATE PROGRAM FOUNDED: 1969

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 8

GRADUATE STUDENTS IN RESIDENCE: 28
NOT IN RESIDENCE: 1

CHAIRMAN: John H. Vann

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Richard S. Thoman, Graduate Advisor, Department of Geography, California State University, Hayward, California 94542
Telephone (415) 881-3193 (Department Office)

PROGRAMS AND RESEARCH FACILITIES: Graduate study leads to the degree Master of Arts in Geography, with a choice from nine specialties: biogeography, cartography, cultural geography, growth of geographic throught, historical geography, physical geography, regional geography, regional planning, and urban geography. Seminars are focused on intensive, directed readings interspersed with discussions of the content, principles, methods and techniques of the selected topic or theme. The intent of the program is to develop a subject to its research frontiers, emphasizing an awareness of both theoretical and pragmatic problems and their significance for the discipline. Seminars are accompanied or followed by directed research yielding oral and written reports intended to motivate the student to recognize problems and to conduct guided investigation of a topic or theme. The program comprises 45 units, including 6 units of thesis or a special project. A graduate internship program is open to students with classified standing. Students must demonstrate proficiency in either a modern foreign language *or* in statistical methods as they apply to geography *or* in mathematics. Cartographic, laboratory, library, and computer facilities are available on campus. The research facilities of the University of California, Berkeley and Stanford University are nearby.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: At present the university operates on a four-quarter, year-round calendar. A student with an undergraduate degree in geography could complete the requirements for the

M.A. in three to five quarters. Once admitted, the department may be able to arrange part-time employment as technical assistant.

STAFF:

Herbert M. Eder, Ph.D., UCLA, 1963, Professor—cultural, agricultural, Middle America, the American tropics

Donald G. Holtgrieve, Ph.D., Oregon, 1973, Associate Professor—geographic education, historical, environmental impact analysis

Robert A. Kennelly, Ph.D., Iowa, 1952, Professor and Vice-President, Administration, of the University

John Lier, Ph.D., UC, Berkeley, 1968, Professor—urban, climatology, population, Europe

Thomas H. Pagenhart, Ph.D., UC, Berkeley, 1969, Associate Professor—water and energy resources, conservation, resource management, Anglo- and Latin America

Vincent K. Shaudys, Ph.D., Ohio State, 1956, Professor—political, regional theory, North America, South Asia, Pakistan (leave of absence, Fall 1980)

Richard S. Thoman, Ph.D., Chicago, 1953, Professor and Graduate Advisor—regional planning and development, economic, North America, growth of geographic thought

William L. Thomas, Ph.D., Yale, 1955, Professor—cultural, geographic theory and philosophy, Southeast Asia, Philippines, East and Southeast Asia, Pacific, tourism

John H. Vann, Ph.D., UC, Berkeley, 1960, Professor and Chairman—physical, geomorphology, alluvial and coastal morphology, Latin America, air photo and remote sensing

Robert E. Winter, Ph.D., candidate, Washington, Lecturer—cartography, map and air photo reading and interpretation

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Brown, Catherine E. "Dry-farmed Grain Cultivation in the Montezuma and Dunnigan Hills, California: A LANDSAT based investigation 1972-1976," 1979.

Leyland, Robert C. "Puerto Ricans in the San Francisco Bay Area, California: An Historical and Cultural Geography," 1980.

Sebastiani, Mirady C. "The *Conucos Laguneros* of the Lake Valencia Basin of Venezuela," 1980.

Shackleford, Melinda S. "Baedecker Revisited: A Model for and Typology of Global Tourist Destinations; A Case Study of San Francisco, California," 1979.

Talco, Stephen D. "The Role of Proxemics in Cultural Grographic Research," 1979.

California State University, Los Angeles

DEPARTMENT OF GEOGRAPHY AND URBAN STUDIES

DATE FOUNDED: 1951 GRADUATE PROGRAM FOUNDED: 1952

DEGREES OFFERED: M.A. (Geography)

GRANTED 7/1/79–6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 31
NOT IN RESIDENCE: 6

ACTING CHAIRMAN: Sin-Fong Han

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Department of Geography, California State University, Los Angeles, 5151 State University Drive, Los Angeles, California 90032
Telephone (213) 224-3822

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts degree in Geography, at California State University, Los Angeles, requires intensive directed study aimed at depth of understanding and intellectual attainment.

The program is designed to prepare students for teaching at all levels, government employment, and advanced preparation in the fields of Geography and Urban Studies.

The department offers some forty undergraduate courses and five graduate seminars to meet degree program objectives. The instructional program is enriched by special topic classes offered by distinguished foreign visiting professors and regular staff. The department also offers a full quarter of instruction and field experience at a station in Mexico, staffed with an interdisciplinary faculty.

The department recognizes the individuality of each student; hence there is considerable flexibility in the program. The following requirements, however, must be satisfied:

1. A Bachelor's degree in geography or its acceptable equivalent.
2. A minimum of 23 quarter units of graduate courses in Geography which must include at least 4 seminars one of which must be the Nature of Geography .... Minimum 23 quarter units.
3. Electives in Upper Division or Graduate courses in geography .... Minimum 14 quarter units.
4. Electives in Upper Division or Graduate courses in field related to geography .... 0–8 quarter units.
   Minimum total 45 quarter units.
5. Graduate thesis or comprehensive examination.
6. Competency in a foreign language or statistics.
7. Completion of the program within 7 years.

The department is able to offer limited financial assistance to a few of its deserving graduate students. Inquiries should be directed to the Department Chair.

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ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates year-round on the quarter system. Students can enter the program at the beginning of any quarter. An appropriate baccalaureate degree from an accredited institution and a formal application to the Office of Admissions and Records is required for admission to the University. Students in need of financial assistance to meet educational expenses are invited to correspond with the University's Financial Aids Office.

STAFF:

Richard Arvidson, Ph.D., Johns Hopkins, 1970, Professor—physical, environmental perception, geomorphology

William Byron, Ph.D., Syracuse, 1954, Professor—cultural, cartography, Middle America

Harry Coffin, Ph.D., UC, Berkeley, 1961, Professor—physical, climatology, meteorology

Norman Gosenfield, Ph.D., UCLA, 1973, Associate Professor—cultural, political, urban

Sin-Fong Han, Ph.D., Michigan, 1971, Professor—population, location theory, developing countries

John Kirchner, Ph.D., Chicago, 1979, Assistant Professor—cultural, transportation, South America

Vincent Mazzucchelli, Ph.D., UCLA, 1973, Associate Professor—cartography, physical, California, deserts

Midori Nishi, Ph.D., Washington, 1955, Professor—cultural, Japan, ethnic minorities

Clement Padick, M.A., UCLA, 1957, Associate Professor—physical, field methods, remote sensing

David Radell, Ph.D., UC, Berkeley, 1969, Professor—cultural, urban, Middle America

John Rees, Ph.D., UCLA, 1971, Associate Professor—cultural, perspectives on environment, Middle America

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Brous, Rolland L. "El Gavilan: Bridging Trade Patterns Within a Municipio-Ures, Sonora, Mexico," 1980.

California State University, Northridge

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1960

DEGREES OFFERED: M.A.

GRANTED 7/1/79-6/30/80: 4

GRADUATE STUDENTS IN RESIDENCE: 50

CHAIR: Ralph D. Vicero

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FOR CATALOG AND FURTHER INFORMATION WRITE TO: Office of Graduate Studies, California State University, Northridge, Northridge, California 91330
Telephone (213) 885-3005

PROGRAMS AND RESEARCH FACILITIES: Major emphases: cartography, climatology-meteorology, cultural, economic, historical, urban, quantitative, geomorphology. Research facilities: Complete cartographic facilities to support drawing, production, and printing of maps (laboratories, cameras, dark room, press). Computerized climatology laboratory, Sanborn map library (depository for maps of cities west of the Mississippi River—145,000 plates). Research map library (275,000 flat maps, 75,000 air photographs). Quantitative laboratory and computer access.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Admission to program with an adequate geographic preparation and a GPA of 3.0 or better. Provisional admission with GPA of 2.5 and an acceptable GRE score.

FACULTY:
James P. Allen, Ph.D., Syracuse, 1970, Professor—cultural, social, population, Anglo-America
Warren R. Bland, Ph.D., Indiana, 1970, Professor—economic, transportation, manufacturing, Canada
William A. Bowen, Ph.D., UC, Berkeley, 1972, Professor—historical, physical, California
Arnold Court, Ph.D., UC, Berkeley, 1956, Professor—climatology, quantitative
William Tim Dagodag, Ph.D., Oregon, 1972, Associate Professor—urban, Latin America
Robert Gohstand, Ph.D., UC, Berkeley, 1973, Associate Professor—Soviet Union, cartography
Robert Hoffpauir, Ph.D., Wisconsin, 1974, Associate Professor—cultural, South Asia
David Hornbeck, Jr., Ph.D., Nebraska, 1974, Professor—historical, Southwest U.S., California, economic, applied geography
Robert B. Howard, Ph.D., UCLA, 1974, Associate Professor—geomorphology
Philip S. Kane, Ph.D., UC, Berkeley, 1975, Associate Professor—geomorphology
Robert B. Lamb, Ph.D., UCLA, 1959, Professor—agricultural, climatology
Gordon Rowland Lewthwaite, Ph.D., Wisconsin, 1956, Professor—historical, Southwest Pacific, history of geographic thought
Gong-Yuh Lin, Ph.D., Hawaii, 1974, Associate Professor—meteorology, cartography
C. Gary Lobb, Ph.D., UC, Berkeley, 1970, Associate Professor—cultural, tropical ecology, Latin America
Elliot G. McIntire, Ph.D., Oregon, 1968, Professor—cultural, Southwest U.S., conservation

Eugene J. Turner, Ph.D., Washington, 1977, Assistant Professor—cartography, computer applications
Ralph D. Vicero, Ph.D., Wisconsin, 1968, Professor—historical Anglo-America
I-shou Wang, Ph.D., Minnesota, 1971, Professor—population, East Asia

PART-TIME FACULTY:
Robert M. Newcomb, Ph.D., UCLA, 1958, Associate Professor—historical and contemporary Europe

EMERITUS FACULTY:
John F. Gaines, Ph.D., Nebraska, 1951, Professor—plant geography, California
David A. Henderson, Ph.D., UCLA, 1964, Professor—Mexico, historical, marine resources

TITLES OF THESES COMPLETED 7/1/79-6/30/80:
Master's:
Dalton, G. David. "Epistemological Uncertainty in Geography," 1980.
Poseley, Gregory J. "Plant Associations of La Jolla, Ventura County, California," 1980.
Robinson, Olivia Gentry. "The Pleistocene Glacial Sequence of Pine Creek, Round Valley, California," 1980.
Taugher, Michael F. "Settlement Frontier of Hispanic California to 1890," 1979.

University of California, Berkeley

DEPARTMENT OF GEOGRAPHY
DATE FOUNDED: 1905 GRADUATE PROGRAM FOUNDED: 1908
DEGREES OFFERED: M.A., Ph.D.
GRANTED 7/1/79-6/30/80: 4 M.A., 4 Ph.D.
GRADUATE STUDENTS IN RESIDENCE: 45
NOT IN RESIDENCE: 33
CHAIRMAN: Allan R. Pred

FOR CATALOG send $2.50 to the Office of the Registrar, 120 Sproul Hall, University of California, Berkeley, California 94720. For admissions application and departmental information write to: Professor Robert Reed, Graduate Adviser, Department of Geography, 501 Earth Sciences Building, Berkeley, California 94720 Telephone (415) 642-3903

PROGRAMS AND RESEARCH FACILITIES: A 4.2-million volume library with exceptional special collections in the Bancroft (Western Americana, Latin America) and East Asiatic libraries; a distinguished faculty of nearly 100 other departments and schools; a large computer center; and easy access to the matchless physical and cultural diversity of the San Francisco Bay Area and Northern California.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The department offers graduate training in cultural, economic, urban, social, regional, and physical geography, and places emphasis on the interrelationships among these specialities and related approaches in other disciplines. Cultural geography includes processes in the formation of rural landscapes, economic development, the culture of cities, and the history of ideas. In urban geography, stress is placed on morphogenesis of American and European cities and on the role of social forces in the shaping of cities. Work is offered in the development of urban and long-distance transportation. Here, and in economic geography, relevant instruction in quantitative methods is provided, and themes emphasized include the "urban field," location theory, city-system and regional development, and innovation diffusion. Emphasis may be placed on ecology and natural resources, including vegetational change and domestication with particular attention to the Western U.S., the arid lands, and the humid tropics. In physical geography, the department offers specialized training in structural and climatic geomorphology, atmospheric processes, paleoclimatology, and biogeography. Many combinations thus are possible. All of the systematic fields noted above readily lend themselves to regional specialization. (See staff listing.)

The department offers financial support in the form of a limited number of teaching assistantships, as well as the Holway Fellowship and Society of Woman Geographers Fellowship. Outstanding applicants are also considered for University Fellowships. Application deadlines: December 1 for Admission/Fellowship; February 1 for Admission only.

FULL-TIME STAFF:

Roger Byrne, Ph.D., Wisconsin, 1972, Associate Professor—biogeography

Orman Granger, Ph.D., Toronto, 1974, Assistant Professor—climatology

David J. M. Hooson, Ph.D., London, 1955, Professor—Soviet Union, history of geographic thought, Australasia

Bernard Q. Nietschmann, Ph.D., Wisconsin, 1970, Professor—cultural, cultural ecology, subsistence societies, tropical marine ecology, Latin America, Melanesia

Theodore M. Oberlander, Ph.D., Syracuse, 1963, Professor—geomorphology, with particular interest in arid regions and climatic morphogenesis, cartographic representation, Southwest Asia

James J. Parsons, Ph.D., UC, Berkeley, 1948, Professor—Latin America (especially Central America and the Andean countries) and California, tropical biogeography, descriptive economic geography

Allan R. Pred, Ph.D., Chicago, 1962, Professor—time-geographic perspective on the individual and society, the growth and development of systems of cities in advanced economies

Robert R. Reed, Ph.D., UC, Berkeley, 1971, Associate Professor—cultural, historical, urbanism in the non-western world, Southeast Asia

Hilgard O'Reilly Sternberg, Ph.D., Louisiana State, 1956, Professor—Portuguese America (Brazil) with emphasis on settlement and development in problem

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areas (Amazonia, the Northeast), humid tropics and the arid zones, the zonal approach to disjunct regions

James E. Vance, Jr., Ph.D., Clark, 1952, Professor—morphogenesis of U.S. and European cities, social structuring of cities, historical transportation geography, Canada

Richard A. Walker, Ph.D., John Hopkins, 1976, Assistant Professor—resources, environmental problems, land-use legislation

Michael J. Watts, Ph.D., Michigan, 1979, Assistant Professor—natural hazards, economic development, systems theory, Africa

PART-TIME STAFF:

Douglas R. Powell, Ph.D. candidate, UC, Berkeley, Lecturer—California, field methods, physical

EMERITUS FACULTY: Clarence J. Glacken; John Leighly; Daniel B. Luten

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/89:

Ph.D.:

Fish, Merle Gerald, Jr. "El Cultivo de Roza: Shifting Cultivation in a Dry Forest of Northwest Mexico," 1980. Mf., Univ. Microfilms.

Henderson, Krimhilde T. "Farm and Forest on the Dorrigo: A Historical-Ecological Study of Land Use Conflict in Northern New South Wales," 1980. Mf., Univ. Microfilms.

Lochhead, Elspeth N. "The Emergence of Academic Geography in Britain in its Historical Context," 1980. Mf., Univ. Microfilms.

Rossi, Randall S. "Land Use and Vegetation Change in the Oak Woodland-Savanna of Northern San Luis Obispo County, California (1774–1978)," 1979. Mf., Univ. Microfilms.

Master's:

Herwitz, Stanley R. "The Regeneration of Selected Tropical Wet Forest Tree Species in Corcovado National Park, Costa Rica," 1979.*

Stine, Scott W. "Hunting and the Faunal Landscape—Subsistence and Commercial Venery in Early California," 1980.*

Sullivan, Donald G. "Environmental History of Little Packer Lake: A Sacramento Valley Oxbow," 1980.*

University of California, Davis

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1955 GRADUATE PROGRAM FOUNDED: M.A. 1964, Ph.D. 1966

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 3 M.A., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 18 M.A., 5 Ph.D.
NOT IN RESIDENCE: 8 M.A., 4 Ph.D.

CHAIRPERSON: Stephen C. Jett

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FOR PROGRAM DESCRIPTION WRITE TO: Graduate Adviser, Department of Geography, University of California, Davis, California 95616
Telephone (916) 752-0790
For catalog, admission forms, and description of financial aid, write to: Dean, Graduate Studies and Research
Telephone (916) 752-0650

PROGRAMS AND RESEARCH FACILITIES: Fields of graduate study include cultural/historical geography, physical geography (especially geomorphology and climatology), economic geography (especially agricultural geography), and urban geography. Regional specializations include Anglo-America (particularly California and the West), Latin America, Europe, Soviet Union, Africa, the Near East, and South Asia. Familiarity with the methods and contributions of allied disciplines is also stressed; the Davis campus has an unusual number of departments which complement geography, with particular strength in the biological and environmental sciences.

The M.A. degree program calls for completion of 30 quarter units of course work and a thesis, or 36 units and a comprehensive examination.

The doctoral candidate is expected to qualify as a general geographer and as a specialist in two distinct fields, one topical and one regional; a written comprehensive examination and an oral qualifying examination must be passed. Also required is a reading knowledge of two foreign languages, or one language and a program of statistics and mathematics.

Besides having the normal cartographic and map facilities, the department enjoys access to a wealth of library materials, on the campus, in the State Library and other state offices in adjacent Sacramento, and in Berkeley and other communities of the San Francisco Bay metropolitan area. The location of the Davis campus near two major urban centers, its proximity to the Pacific Coast and to the Sierra Nevada and Coast Ranges, and its position in the heart of the Central Valley also provide unusual field opportunities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The Davis campus operates on the quarter system (with two 6-week summer sessions rather than a summer quarter). Forms for admission and for scholarships may be obtained from the Dean, Graduate Studies and Research, University of California, Davis, California 95616. Teaching Assistantships may be applied for directly to the Graduate Adviser, Department of Geography. All applicants must supply GRE Aptitude Test scores and three letters of recommendation, and students from non-English-speaking countries must submit TOEFL scores.

STAFF:

Conrad J. Bahre, Ph.D., UC, Riverside, 1974, Assistant Professor—cultural, plant geography, Latin America

Dennis J. Dingemans, Ph.D., UC, Berkeley, 1975, Assistant Professor—urban, social, economic, Soviet Union

Howard F. Gregor, Ph.D., UCLA, 1950, Professor—economic, agricultural, Anglo-America, California

Louis E. Grivetti, Ph.D., UC, Davis, 1976, Assistant Professor—cultural, food and nutrition, Near East, Africa

David M. Helgren, Ph.D., Chicago, 1975, Assistant Professor—geomorphology, Quaternary studies, Africa

Stephen C. Jett, Ph.D., Johns Hopkins, 1964, Professor and Chairperson—cultural, conservation, native cultures, southwestern United States

Marlyn L. Shelton, Ph.D., Southern Illinois, 1973, Assistant Professor—climatology, water resources, physical systems

Frederick J. Simoons, Ph.D., UC, Berkeley, 1956, Professor—cultural, food habits, domestication, Africa, South Asia

Kenneth Thompson, Ph.D., Northwestern, 1955, Professor—historical, political, perception, California, Western Europe

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Robinson, Curtis John. "Community Gardening in Davis, California: A Geographical Study," 1980.

Rousseau, Jacqueline Joanne. "Climate as an Integrating Factor for Agriculture in a Dry Environment," 1980.

University of California, Los Angeles

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1915 GRADUATE PROGRAM FOUNDED: 1934

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 5 M.A., 6 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 33 M.A. 32 Ph.D.
NOT IN RESIDENCE: 2 M.A. 10 Ph.D.

CHAIR: Tom L. McKnight

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Advisor, Department of Geography, University of California, Los Angeles, California 90024
Telephone (213) 825-4655 or 825-1071

PROGRAMS AND RESEARCH FACILITIES: The large staff of the Department covers major research areas in geography. The fields of geomorphology, climatology, biogeography, ecosystem analysis and conservation, cultural geography, urban geography, and regional geography receive special emphasis. Contributing strength to the departmental offerings are many distinguished departments in cognate disciplines in which students are encouraged to do part of their work, and area studies programs embracing most parts of the world.

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Laboratories are maintained for work in geomorphology, climatology, biogeography, cartography, remote sensing, and quantitative methods. The Campus Computing Network's IBM 3033 has terminals in the Department.

A thesis is a part of the M.A. program for continuing students. Emphasis is placed on the Ph.D. degree. At least one research tool is required for graduate study, subject to approval by the graduate student's committee.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: UCLA operates on a quarter system; students may enter in the Fall, Winter, and Spring quarters. Students are selected for admission to the graduate program on the basis of a completed B.A. in Geography or an allied field, a high grade point average, the GRE Aptitude Test, and three letters of recommendation. The M.A. is a prerequisite to the Ph.D. degree. University fellowships and teaching assistantships are available on a competitive basis. Application deadline for admission, fellowships, and assistantships: December 30 for following Fall Quarter.

STAFF:

Charles F. Bennett, Ph.D., UCLA, 1959, Professor—biogeography (especially human influences on ecosystems), Latin America, humid tropics, conservation, Iberia

Rainer Berger, Ph.D., Illinois, 1960, Professor—scientific dating methods in environmental sciences and archeology, physical geography, geophysics

Henry J. Bruman, Ph.D., UC, Berkeley, 1940, Professor—historical geography of Latin America, culture history of tropical agriculture, agricultural colonization in Brazil, Alexander von Humboldt

William A. V. Clark, Ph.D., Illinois, 1964, Professor—urban, quantitative analysis

Gary S. Dunbar, Ph.D., Louisiana State, 1956, Professor—history of geography, history of travel and discovery, historical, cultural

J. Nicholas Entrikin, Ph.D., Wisconsin-Madison, 1975, Assistant Professor—urban, geographic thought

Gerry A. Hale, Ph.D., UCLA, 1966, Associate Professor—sociocultural geography, especially capitalism, inequality and hegemony in the modern world, Northeast Africa, Middle East

Susanna B. Hecht, A.B.D., UC, Berkeley, Adjunct Assistant Professor—soil geography, grassland ecosystems

James Johnson, A.B.D., Michigan State, Acting Assistant Professor—social geography

Huey Louis Kostanick, Ph.D., Clark, 1948, Professor—political, Europe and Soviet Union, special interests: world problem areas and demographic migrations and changes in Eastern Europe and the Soviet Union

Mary Ann Lee, Ph.D., Hawaii, 1979, Visiting Assistant Professor—ecosystem analysis

Richard F. Logan, Ph.D., Harvard, 1949, Professor—geography of arid lands, field techniques, California, Southern Africa

Tom L. McKnight, Ph.D., Wisconsin, 1955, Professor and Chairman—North America, Australia and the Southwest Pacific, cultural zoogeography, conservation

Howard J. Nelson, Ph.D., Chicago, 1949, Professor—metropolitan Los Angeles, urban

Antony R. Orme, Ph.D., Birmingham, 1961, Professor—geomorphology, environmental systems and planning, Quaternary studies, western North America, Southern Africa, Ireland

Christopher L. Salter, Ph.D., UC, Berkeley, 1970, Associate Professor—cultural geography with a regional focus on China, field analysis in cultural geography, landscape in literature and landscape aesthetics

Jonathan D. Sauer, Ph.D., Missouri Botanical Garden and Washington University, St. Louis, 1950, Professor—plant geography, plant migration, historical geography of crops and weeds, tropical coastal and island vegetation

Allen Scott, Ph.D., Northwestern, 1965, Visiting Professor—economic geography

John D. Stephens, Ph.D., Michigan State, 1975, Visiting Assistant Professor—cartography, computer cartography

Werner H. Terjung, Ph.D., UCLA, 1966, Professor—climatology, especially exchanges of energy, mass and momentum, and process-response systems in physical geography

Norman J. W. Thrower, Ph.D., Wisconsin, 1958, Professor—history of cartography, cartography (especially thematic mapping), remote sensing (especially land use mapping from hyper-altitude imagery), Western Europe

Stanley W. Trimble, Ph.D., Georgia, 1973, Associate Professor—conservation, hydrology, fluvial geomorphology, research techniques

Hartmut Walter, Ph.D., Bonn, 1967, Professor—biogeography, experimental conservation, zoogeography, Mediterranean-type ecosystems, Africa, Europe, Middle East

Frank Weirich, A.B.D., Toronto, Acting Assistant Professor—physical, geomorphology

Walter E. Westman, Ph.D., Cornell, 1971, Associate Professor—plant ecology, nutrient cycling, environmental impact analysis, water quality management, statistical methods, Australia, California

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Ahmed, Ahmed. "The Dynamics of Land Use and Woody Vegetation Changes in Jebal Marra, Darfur, Sudan," 1979. Mf., Univ. Microfilms.

Caldwell, Patricia. "Television News Maps: An Examination of their Utilization, Content and Design," 1979. Mf., Univ. Microfilms.

Gossette, Franklin. "Social Ecology in a Contemporary Chinese City: Taichung, Taiwan," 1980. Mf., Univ. Microfilms.

Miretti, Dominick. "The Geography of Animal Protein Availability in Mexico: An Assessment of Export as a Limiting Dietary Factor," 1979. Mf., Univ. Microfilms.

Newby, Linda. "Impact of Salt Marsh Chemistry on *Spartina* and *Saliornia* Distribution, Indian Island, Humboldt Bay, California," 1980. Mf., Univ. Microfilms.

O'Rourke, Patricia. "A Simple Crop Energy Budget Model and Aspects of Worldwide Potential Productivity," 1979. Mf., Univ. Microfilms.

Master's:

Arzt, Ira. "Use of Sewage Sludge to Rehabilitate Degraded Lands in Southern California: A Capability," 1979.*

Band, Lawrence. "Environmental Constraints on the Development of Small Headwater Stream Networks," 1979.*

Drake, Joan. "The Effects of Tropical Storm Swell on Southern California Summer Beach Profiles," 1980.*

McQueen, William. "Community Groups in the Eastern Santa Monica Mountains: With Special Reference to the Beverly Glen Residents Association," 1979.*

Moreno, Daniel. "The Role of Trade Area Demographics in Evaluation of Retail Sites," 1979.*

University of California, Riverside

DEPARTMENT OF EARTH SCIENCES

DATE FOUNDED: 1954 GRADUATE PROGRAM FOUNDED: 1962

DEGREES OFFERED: M.A., M.S., Ph.D.

GRANTED 7/1/79–6/30/80: 1 Masters

GRADUATE STUDENTS IN RESIDENCE: 13 Masters, 8 Ph.D.
NOT IN RESIDENCE: 2 Masters, 2 Ph.D.

CHAIRMAN: Michael O. Woodburne

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Homer Aschmann, Department of Earth Sciences, University of California, Riverside, California 92521
Telephone (714) 787-3415 or 3435

The Department of Earth Sciences offers both undergraduate and graduate degrees in geography, geology, and geophysics. The following material describes the program in geography.

PROGRAMS AND RESEARCH FACILITIES: Both the M.A. and M.S. degrees are offered. The M.A. is for students interested in teaching or in pursuing a further degree. It requires satisfactory completion of 36 quarter units of course work and a comprehensive examination. The M.S. is for students interested in applied geography. Its requirements include a thesis.

Candidates for the Ph.D. degree are expected to show basic competence in both physical and cultural geography, and the history and methodology of the discipline. Research problems in Latin America, arid lands, and climatology are favored by the location of the campus as well as the interests of the staff. Recently emphasis has been placed on geographic applications of remotely sensed imagery and automated cartography, supported by a large and diversified collection of images gathered from aircraft and spacecraft.

A well-equipped cartographic laboratory is present in Department quarters, as well as desk and shelf space for all graduate students. The University Library contains a map library which is a depository of the Army Map Service, and subscribes to

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several hundred periodicals in geography and supporting fields. The complex regional character of Southern California offers many field situations of interest to students of both cultural and physical geography.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of California is on a quarter calendar, although a summer session rather than summer quarter is offered at present. Admission based on previous course work, experience and references. Positions are available to graduate students as Teaching or Research Assistants. Fellowships are available to especially well-qualifed applicants.

GEOGRAPHY STAFF:

Homer Aschmann, Ph.D., UC, Berkeley, 1954, Professor—cultural, Latin America, arid lands

Bonnie Barton, Ph.D., Michigan, 1972, Lecturer—urban, economic, quantitative analysis

Carl Hansen, Ph.D., Wisconsin, 1966, Associate Professor—geomorphology, Africa, arid lands

Claude Johnson, M.S., UC, Riverside, 1968, Lecturer—remote sensing, automated cartography, agricultural geography

Richard Minnich, Ph.D., UCLA, 1978, Assistant Professor—remote sensing, plant geography, climatology

Robert Pease, Ph.D., UCLA, 1964, Professor—physical, California, cartography, urban climatology

One additional faculty member will be added for 1980-81.

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Lightfoot, James E. "The Changing Agricultural Landscape of Talofofo, Guam," 1979.*

University of California, Santa Barbara

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1975 GRADUATE PROGRAM FOUNDED: 1975

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 6 M.A., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 30 M.A., 2 Ph.D.
NOT IN RESIDENCE: 22 M.A., 2 Ph.D.

CHAIRMAN: David S. Simonett

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Reginald Golledge, Graduate Advisor, Department of Geography, University of California, Santa Barbara, California 93106
Telephone (805) 961-3663 or 3139

PROGRAMS AND RESEARCH FACILITIES: The department offers specialized graduate training in urban and economic geography, location theory, movement systems, behavioral geography, cartography, soils geography, geomorphology, hydrology, agricultural geography, and biogeography. In all these fields the program places particular emphasis on the acquisition of mathematical and technical skills, especially those of remote sensing and digital image processing of remotely sensed data, computer applications in geography, computer cartography, and multivariate data processing.

Research facilities include a remote sensing laboratory which contains specialized equipment, a soils laboratory, and a well-equipped cartography laboratory. The campus library with over a million volumes maintains a map library with close to 170,000 sheets of maps and 118,000 items of imagery. The campus computer center houses a Hitachi AS-6 and a PDP 11/70 which provides interactive Basic. The Computer Systems Laboratory has a VAX 11/780, PDP 11/45 and numerous peripherals. It is used for much Geography research and has over $500,000 of Geography equipment. The location of the campus provides easy access to a wide diversity of environments including the Pacific Ocean marine environment, the agricultural environment of the Central Valley, and the Los Angeles metropolitan region.

The Master's Program offers two plans: 1) 30 quarter units of course work and a thesis; or 2) 36 quarter units of course work and a comprehensive examination. Coursework outside the department is actively encouraged where it leads to a stronger program and such courses may account for up to one third of the credits necessary for completion of the degree.

The Ph.D. program is designed around four systematic specialties, two each in Physical and Human Geography. These are Water Resource Geography, Vegetation Resource Geography, Geographical Movement Systems, and Geographical Behavior Systems. One systematic specialty will be chosen for major emphasis and one for minor emphasis. In addition all students are expected to develop great depth in one or more skills drawn from the following: mathematical, quantitative and computer analysis; computer cartography and geographical information systems; and remote sensing.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: UCSB operates on the quarter system and incoming students may enter at the beginning of any quarter. Students applying for entrance to the program should have a demonstrated capability in Geography or other appropriate fields, have acquired a high grade point average, and should submit both their verbal and quantitative GRE scores upon formal application. The department has a number of teaching assistantships and research fellowships available and students may also apply for University fellowships.

STAFF:

Jeffrey C. Dozier, Ph.D., Michigan, 1974, Associate Professor—hydrology, geomorphology, quantitative

John E. Estes, Ph.D., UCLA, 1968, Professor—remote sensing, agricultural, field methods

Reginald G. Golledge, Ph.D., Iowa, 1966, Professor—urban, behavioral

David S. Simonett, Ph.D., Sydney, 1954, Professor and Chairman—remote sensing, soils, agricultural

Terence R. Smith, Ph.D., Johns Hopkins, 1971, Assistant Professor—economic, urban, quantitative

Alan H. Strahler, Ph.D., Johns Hopkins, 1969, Assistant Professor—biogeography, physical, quantitative

Waldo R. Tobler, Ph.D., Washington, 1961, Professor—cartography, location theory

Three positions are now being filled in Human and Physical Geography.

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Baggett, Jay D. "Assessing Groundwater Contamination at Rocky Mountain Arsenal Through Quantitative Studies of Plant Succession," 1979.

Davis, Robert. "Simulation of the Thermal Regime of an Alpine Soil Beneath a Snow Pack," 1980.

Frew, James. "Remote Sensing of Snow Surface Albedo," 1980.

O'Neill, Peggy. "Ground-based Microwave Radiometric Measurement of Soil Moisture Under Bare Field Conditions in the Southern San Joaquin Valley," 1980.

Richardson, G. Donald. "The Appropriateness of Using Various Minkowskian Metrics for Representing Cognitive Maps Produced by Nonmetric Multidimensional Scaling," 1979.

Torburn, Tara. "Identification of Cotton Fields from Landsat Imagery in the Southern San Joaquin Valley, California," 1980.

Chicago State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1970 GRADUATE PROGRAM FOUNDED: 1958

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 3

GRADUATE STUDENTS IN RESIDENCE: 8
NOT IN RESIDENCE: 30

CHAIRMAN: Irving Cutler

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. G. Munir Ahmed, Chicago State University, Ninety-Fifth Street at King Drive, Chicago, Illinois 60628
Telephone (312) 995-2188

PROGRAMS AND RESEARCH FACILITIES: The flexible M.A. program in geography is designed for students interested in teaching, government, private employment, or further research. Half of the necessary 30 semester hours constitutes a required core program. The other half (5 courses) consists of electives selected from the present offerings of over 30 graduate courses in geography. An M.A. in geography is also offered with a concentration in urban geographic studies. There are no language requirements. Two seminar papers are required in lieu of a thesis and a final comprehensive examination is given before graduation. Work can be pursued either in the day or evening programs or in both.

The library and laboratory facilities are enhanced by the vast resources of the Chicago Metropolitan Area, which also serves as a source of extensive and varied urban field work opportunities. In 1972 the university occupied a completely new $100,000,000 campus containing modern departmental classrooms, laboratories, reading room, and map library.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Admission requirements: (1) a Bachelor's degree with a grade average of B or better although promising students may be admitted conditionally with a slightly lower average and (2) fifteen hours of undergraduate work in geography, although conditional admission is sometimes possible with fewer hours. The school is on the trimester system and has an extensive system of scholarships, assistantships, and loan and work-study programs.

STAFF:

G. Munir Ahmed, Ph.D., Chicago, 1956, Professor—economic, Asia, Middle East, political

Frederick Blum, M.A., Chicago, 1961, Associate Professor—urban, planning, historical, cultural

Vernon W. Brockmann, Ph.D., Northwestern, 1951, Professor—climatology, conservation, energy

Irving Cutler, Ph.D., Northwestern, 1964, Professor—transportation, industrial, urban, Anglo-America

John Muhr, M.A., Chicago State, 1975, Assistant Professor—cartography, measurement, computer, Africa

Herbert L. Rau, Jr., Ph.D., Northwestern, 1958, Professor—Latin America, regional analysis, physical, climatology

Irvin Roth, Ph.D., Syracuse, 1968, Professor—economic, industrial, planning, teaching of geography

University of Chicago

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1903 GRADUATE PROGRAM FOUNDED: 1903

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 3 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 6 Masters 9 Ph.D.
NOT IN RESIDENCE: 10 Masters 34 Ph.D.

CHAIRMAN: Norton Ginsburg

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Secretary, Department of Geography, University of Chicago, 5828 South University Avenue, Chicago, Illinois 60637
Telephone (312) 753-3921

PROGRAMS AND RESEARCH FACILITIES: The program of graduate study at the University of Chicago begins with an orientation course which meets during the autumn quarter and includes contributions by all members of the staff. In addition to this course, candidates entering with a bachelor's degree are expected to take a minimum of 8 other courses in consultation with the faculty. After completion of these requirements, attention is directed to the development of research capability at the doctoral level in a particular field. Fields of particular interest at the present time include: urban geography, economic geography, environmental geomorphology, Pleistocene ecology, cultural and historical geography, political geography, and specialized study of one or more of these topics in selected regions. Each of the regional specializations necessitates study of the relevant cultures and languages. Doctoral dissertations are published for wide distribution in the Department's *Research Papers*.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Chicago is on the quarter system. Since the special program for incoming graduate students takes place in the autumn, new graduate students are advised to initiate their work in that quarter, but it is not necessary that they do so.

Applications for admission should be made to the Office of Admissions and Aid, University of Chicago, 5801 Ellis Avenue, Chicago, Illinois 60637, on forms obtained from that office. Although applications for admission can be considered at any time, students seeking financial aid should ordinarily file an application for admission and aid before January 15 of the year in which they hope to begin graduate work. Students having questions about opportunities for studies related to their special interests are invited to write to the chairman.

Scholarship and fellowship aid is available on a competitive basis for part or all of tuition. Students receiving aid are expected to devote full time to their academic programs. The Department has no teaching assistantships, but research assistantships are available.

STAFF:

Karl W. Butzer, D.Sc., Bonn, 1957, Professor, Geography and Anthropology—prehistoric man-land interactions, geomorphology

Michael P. Conzen, Ph.D., Wisconsin, 1972, Associate Professor—historical, urban, North America

Norton Ginsburg, Ph.D., Chicago, 1949, Professor—political, economic development, urban, East and Southeast Asia

Chauncy D. Harris, Ph.D., Chicago, 1940, Samuel N. Harper Distinguished Service Professor—Soviet Union, bibliography of geography, urban, economic

Donald W. Jones, Ph.D., Chicago, 1974, Assistant Professor—economic, economic development

Marvin W. Mikesell, Ph.D., UC, Berkeley, 1959, Professor—cultural conflict

William D. Pattison, Ph.D., Chicago, 1957, Associate Professor—history of geography, geography in education

Paul Wheatley, Ph.D., D.Lit., London, 1958, Irving B. Harris Professor, Geography and Social Thought—comparative urbanism

ASSOCIATED STAFF:

Jon Leverenz, M.S., Wisconsin, 1960, Senior Lecturer—cartographic techniques

Gerson M. Rosenthal, Jr., Ph.D. (Zoology), UC, Berkeley, 1954, Associate Professor, Biology (the College)—ecological systems

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Holmes, Roland Clifford. "Water Use in Southern Peru: The Chili Basin," 1979.

Master's:

Green, David Y. "The Emergence of the Earliest Urban Hierarchy in the Ancient Levant," 1980.

University of Cincinnati

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1907 GRADUATE PROGRAM FOUNDED: 1931

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 4 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 11 M.A. 5 Ph.D.
NOT IN RESIDENCE: 9 M.A. 10 Ph.D.

HEAD: K. Bruce Ryan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director of Graduate Studies in Geography, Department of Geography, University of Cincinnati, Cincinnati, Ohio 45221
Telephone (513) 475-3421

PROGRAMS AND RESEARCH FACILITIES: The Department continues its long tradition of urban research and Community involvement. Within that tradition, four applied programs are offered—locational analysis (geared to site selection and market research for both the public and private sectors); cultural-historical geography (population dynamics and community development); environmental quality and management (including government regulations); and regional development (mainly in the Third World).

Over the years, students of the Department have found employment in planning and development (30 percent of those graduating), education (35%), public administration (7%), and business (28%). Work experience and training in marketable skills are integral parts of the graduate program. In fact, America's first "co-op" system of higher education began in Cincinnati in 1906, and continues to make the city a living laboratory for studies of all kinds. There is also a well-established three-year program leading jointly to the Masters degree in Geography and the Master of Community Planning.

Six million books are available in the twenty research collections that comprise the Cincinnati Libraries Consortium, among them the Archival Library of the AAG. Computer facilities (fifth largest in the U.S.) include AMDAHL 470/V6-II, IBM 1401, and an experimental hybrid system. The Department's quarters in Swift Hall have just been modernized at a cost of $2.7 million.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Quarter System. Application for admission to the Geography program of the Division of Graduate Studies, or for graduate aid, obtained by writing to the Department of Geography, University of Cincinnati, Cincinnati, Ohio 45221 for application form and a current Graduate School Bulletin. GRE scores are required.

Financial Aid includes Graduate Assistantships, Research Assistantships, Tuition Scholarships, and University Internships.

STAFF:

Percy H. Dougherty, Ph.D., Boston, 1979, Assistant Professor—karst, hydrology, climatic geomorphology, computer cartography

Robert B. McNee, Ph.D., Syracuse, 1953, Professor—theory of urban and economic geography, multinationals

Jonathan S. Mesinger, Ph.D., Syracuse, 1977, Assistant Professor—cultural landscape, historical, historic preservation, urban social

Wolf Roder, Ph.D., Chicago, 1965, Professor—resources and economic development, field methods, statistical methods, Africa

Kenneth Bruce Ryan, Ph.D., Australian National, 1966, Professor—rural settlement policy, architectural diffusion, Australia

Roger M. Selya, Ph.D., Minnesota, 1971, Assistant Professor—economic development (especially East Asia), population and health, history and philosophy of geography

Robert B. South, Ph.D., Maryland, 1972, Associate Professor—economic, Latin America

Howard A. Stafford, Ph.D., Iowa, 1960, Professor—industrial location, economic, urban

Laurence G. Wolf, Ph.D., Syracuse, 1966, Associate Professor—cartography, cultural, population, urban

ASSOCIATED FACULTY:

David Prosperi, Ph.D., Indiana, 1978, Assistant Professor of Planning—transportation, economic geography, quantitative methods

David P. Varady, Ph.D., Pennsylvania, Associate Professor of Planning—housing, urban residential mobility, social policy

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Pack, Stirling D. "Expansion in the Multiplant Corporate Sector: The Integrated Oil Industry, 1963-77," 1980.* Mf., Univ. Microfilms.

Master's:

Allen-Neumeister, Eve. "Metropolitan Industrial Land Values," 1979.*

Smith, Richard J. "An Analysis of Changes in Bus Ridership in Cincinnati," 1979.*

Stempfer, Robert P. "A Multivariate Statistical Analysis of Industrial Parks in Pennsylvania," 1979.*

Tunstall, Richard J. "The Changing Composition of Retailing in Downtown Cincinnati, 1945-1977," 1979.*

Clark University

GRADUATE SCHOOL OF GEOGRAPHY

DATE FOUNDED: 1887 GRADUATE PROGRAM FOUNDED: 1921

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 3 M.A., 6 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 1 M.A., 51 Ph.D.
NOT IN RESIDENCE: 1 M.A., 27 Ph.D.

DIRECTOR: Leonard Berry

FOR FURTHER INFORMATION WRITE TO: Katherine A. Parella, Administrator, Graduate School of Geography, Clark University, Worcester, Massachusetts 01610
Telephone (617) 793-7337

PROGRAMS AND RESEARCH FACILITIES: Clark University remains an anachronism! In the era of the multiversity, a University that offers doctoral programs to 350 graduate students with a total student body around 2,000 is unique. Clark is human scale, a 35 acre campus in the midst of Worcester, where students and faculty can communicate and the opportunities for interdisciplinary work are enhanced. The program is broadly structured through joint faculty-student efforts. Features of the geography curriculum include principal emphasis upon doctoral programs; greater emphasis on selected concentrations; options to the language requirement; and an A.B.-Ph.D. program.

Cross-disciplinary training is encouraged as evidenced by joint staff appointments with other departments. Major fields of concentration include: 1) cultural/humanistic; 2) environmental affairs/management; 3) physical geography of human systems; 4) regional/international development/political economy; 5) urban/social/planning. Also offered as an area of special competence is cartography.

Important innovations include: College teaching internships, fellowships at overseas universities for advanced graduate students; and summer foreign field research for selected students. Special research opportunities are available in the school's sponsored research projects.

The journal *Economic Geography* is edited by a staff member, and the graduate students produce their own journal, *The Monadnock*. Each graduate student is provided with a personal work space and joint facilities for both research and relaxation. The school occupies modern quarters—a complex of laboratory, classroom, office, reading library and research space that provides unique opportunities for the development of geographical research and teaching.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system with 7-week modular term at end of spring semester. Three year residency required for Ph.D. (2 years for those entering with an M.A.). *Admission Requirements:* interests coincident with those of department; evidence of competence to pursue graduate work at the Ph.D. level; GRE scores required of U.S. and Canadian students; applicants from related fields will be considered; application deadline—February 15th. *Financial Aid* includes tuition fellowships, research and teaching assistantships.

FULL-TIME FACULTY:

Leonard Berry, Ph.D., Bristol, 1969, Professor of Geography, Director Graduate School of Geography, Co-Director International Development Program—applied geomorphology, East Africa

Martyn J. Bowden, Ph.D., UC, Berkeley, 1968, Professor—historical-cultural, humanistic studies, urban environmental cognition

Anne Buttimer, Ph.D., Washington, 1965, Associate Professor—social, urban social space, philosophy of geography

Douglas L. Johnson, Ph.D., Chicago, 1972, Associate Professor—cultural, landscape, economic development, arid lands

Kirsten Johnson, Ph.D., Clark, 1977, Assistant Professor of Geography—environmental management, cultural

Gerald J. Karaska, Ph.D., Pennsylvania State, 1962, Professor of Geography and Editor of Economic Geography—urban, economic, quantitative methods

Roger E. Kasperson, Ph.D., Chicago, 1966, Professor of Geography and Government—urban-political, decision making, nuclear risk assessment

Robert W. Kates, Ph.D., Chicago, 1962, Professor of Geography and Research, Professor in the Center for Technology, Environment and Development

Duane F. Knos, Ph.D., Iowa, 1956, Professor—geography and its teaching, urban, simulation as a learning process

William A. Koelsch, Ph.D., Chicago, 1966, Associate Professor of History and Geography, University Archivist—historical, history of geographic education

Laurence A. Lewis, Ph.D., Northwestern, 1965, Associate Professor—geomorphology, slope processes, food production, soil erosion

David C. Major, Ph.D., Harvard, 1966, Research Professor—water resource economics

Sharon Nicholson, Ph.D., Wisconsin, 1976, Assistant Professor of Geography—climatology, arid lands

J. Richard Peet, Ph.D., UC, Berkeley, 1968, Associate Professor—social, economic, community planning, Marxist geography

Harry E. Schwarz, B.C.E., George Washington, 1964, Professor of Environmental Affairs—water resource planning and water reuse

Harry Steward, Ph.D., Wales (Swansea), 1972, Associate Professor—cartography, remote sensing imagery

Billie L. Turner II, Ph.D., Wisconsin, 1974, Assistant Professor of Geography—cultural, agricultural systems

ADJUNCT FACULTY:

Dennis W. Ducsik, Ph.D., M.I.T., 1976, Assistant Professor of Science, Technology and Society

AFFILIATE FACULTY:

Saul B. Cohen, Ph.D., Harvard, 1955, President of Queens College, CUNY, Research Professor of Geography—political, educational networks

Daniel M. Dworkin, Ph.D., Clark, 1974, Associate Professor of Geography—water resources, international development

Philip O'Keefe, Ph.D., London, 1973, Associate Professor of Geography—resource economics, natural hazards, underdeveloped countries, Marxist resource theory

EMERITUS:

Raymond E. Murphy, Ph.D., Professor of Geography
Henry J. Warman, Ph.D., Professor of Geography

STAFF:

Michael Dulka, Map Librarian
Herbert C. Heidt, Manager, Cartographic Laboratory
Katherine A. Parella, Administrator

TITLES OF DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Domingo, Vernon Albert. "Underdevelopment in Metropolitan Society: A Case Study—Surinamers in the Netherlands," 1980.

Fincher, Beatrice Ruth. "The Local State and the Urban Built Environment: The Case of Boston in Late Capitalism," 1979.

Halverson, Bret McClean. "The Importance of Individual Difference for Urban Environmental Education," 1980.

Krim, Arthur James. "Imagery in Search of a City: The Geosophy of Los Angeles 1921-1971," 1980.

Sawyer, Stephen W. "Residential Solar Energy Use: A Comparative Assessment by Solar Consumers and the Solar Research Community," 1980.

Susman, Paul Henry. "Problems of Regional Decline in Advanced Capitalist Countries: The Case of Northeast England," 1979.

University of Colorado

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1927   GRADUATE PROGRAM FOUNDED: 1930

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 8 M.A., 5 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 35 M.A. 21 Ph.D.
NOT IN RESIDENCE: 2 M.A. 13 Ph.D.

CHAIRMAN: M. John Loeffler

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Secretary, Department of Geography, Campus Box 260, University of Colorado, Boulder, Colorado 80309
Telephone (303) 492-8311

PROGRAMS AND RESEARCH FACILITIES: Faculty members based on the University's campuses in Boulder, Colorado Springs, and Denver jointly form the Geography Graduate Faculty. Students' programs may entail work on one or more of these campuses and include research and study in a wide range of interests. Prospective students are urged to consult the accompanying list for specific subfields of faculty expertise and interest.

The Department maintains teaching and research relationships with the Institute of Behavioral Science (IBS), the Institute of Arctic and Alpine Research (INSTAAR) in Boulder, and the Centers for Urban Affairs and Urban Transportation Studies in Denver. The University's Norlin Library in Boulder has a combined collection of 1,500,000 volumes as well as a large map library. Campuses at Colorado Springs and Denver have terminals linked to the two CDC 6400 computers in the Computing Center in Boulder. Such agencies as the National Center for Atmospheric Research, National Oceanographic and Atmospheric Administration, and Social Science Education Consortium in Boulder, and the U.S. Geological Survey and many more federal, state, and metropolitan agencies in Denver, offer opportunities to the student.

ADMISSION REQUIREMENTS, ACADEMIC PLAN, AND FINANCIAL AID: Students who are admitted to the graduate program should have a good undergraduate background in the physical or social sciences. Students with strong backgrounds in disciplines other than geography are encouraged to apply. In addition to department approval, an applicant for admission as a regular degree student must (1) hold a baccalaureate degree from a college or university of recognized standing for M.A. admission, and an M.A. degree for Ph.D. admission, or have adequate preparation to enter graduate study; (2) show promise of ability to pursue satisfactorily advanced study and research, as judged by his or her previous scholastic record, and have at least a 2.75 undergraduate grade point average on a 4.0 system. GRE verbal and quantitative scores are required.

Entering graduate students' first fall semester will normally include two proseminars, one in physical and one in human geography, and if appropriate, the History and Nature of Geography. Beyond this requirement, students' programs are individually structured in consultation with faculty advisors.

Financial aid may be available in the form of Teaching and Research Assistantships and University Fellowships. The application deadline for Fellowships is January 15, and for Teaching or Research Assistantships it is February 15.

FACULTY:

University of Colorado at Boulder:

Roger G. Barry, Ph.D., Southampton, 1965, Professor—climatology (synoptic, paleo-climatology), Arctic; Associate Director, INSTAAR; Director, World Data Center-A for Glaciology (Snow and Ice)

T. Nelson Caine, Ph.D., Australian National, 1966, Professor—geomorphology (alpine processes); INSTAAR

Kenneth A. Erickson, Ph.D., UC, Berkeley, 1965, Professor—cultural, cartography, geographic thought, U.S.S.R.

David E. Greenland, Ph.D., Canterbury, 1971, Associate Professor—climatology (micro, applied, and climatic change), environmental conservation; INSTAAR

Nicholas Helburn, Ph.D., Wisconsin, 1950, Professor—geographic education, agricultural, natural hazards

A. David Hill, Ph.D., Chicago, 1964, Professor—cultural, social, geographic education, Latin America

Jack D. Ives, Ph.D., McGill, 1956, Professor—geomorphology, geoecology, Arctic and Alpine environments; Director, INSTAAR

M. John Loeffler, Ph.D., Washington, 1952, Professor—Colorado, water resources, physical

Hazel Morrow-Jones, Ph.D. candidate, Ohio State, Assistant Professor—residential land use, population, regional development

Theodore C. Myers, M.A., History, M.A., Geography, Indiana, 1963, 1964, Assistant Professor—historical, political, Europe, North America

Risa I. Palm, Ph.D., Minnesota, 1972, Associate Professor—urban, social, housing in American cities; IBS

Horace F. Quick, Ph.D., Michigan, 1956, Professor—biogeography, population, land management systems and policy, resource systems dynamics

Albert W. Smith, Ph.D., Washington, 1952, Professor—cartography, map interpretation

Gilbert F. White, Ph.D., Chicago, 1942, Distinguished Professor Emeritus—natural resources, natural hazards

University of Colorado at Colorado Springs (Cragmor Road, Colorado Springs, Colorado 780907; 303-598-3737)

Jacquelyn L. Beyer, Ph.D., Chicago, 1957, Professor—resource management, geographic education, Africa

Christopher H. Exline, Ph.D., UC, Berkeley, 1978, Assistant Professor—urban, impacts of growth restriction on metropolitan systems, cartography, geographic education

Paul K. Grogger, Ph.D., Utah, 1974, Associate Professor—geographic education, environmental and natural resources planning, physical

Eve C. Gruntfest, Ph.D. candidate, Colorado, Visiting Assistant Professor—natural hazards, recreational geography, environmental perception

Robert P. Larkin, Ph.D., Pennsylvania State, 1973, Associate Professor—population, geographic education, energy resources

University of Colorado at Denver: (1100 14th Street, Denver, Colorado 80202; 303-629-2647)

Melvin Albaum, Ph.D., Ohio State, 1969, Associate Professor—population, social, urban mental health

Yuk Lee, Ph.D., Ohio State, 1970, Professor—mathematical, quantitative, urban, land use, retail location

C. Gilbert Schmidt, Ph.D., Washington, 1973, Associate Professor—location theory, urban and economic, regional development

Richard E. Stevens, Ph.D., Kansas, 1961, Professor—agricultural, Africa

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Czerniak, Robert J. "Municipal Annexation and the Political Geographic Growth of the Central City with Special Reference to Denver, Colorado," 1979. Mf., Univ. Microfilms.

Duckson, Donald W., Jr. "Land Use Intensity and Water Quality," 1979. Mf., Univ. Microfilms.

Elliott, Deborah Louise. "The Stability of the Northern Canadian Tree Limit: Current Regenerative Capacity," 1979. Mf., Univ. Microfilms.

Keen, Richard A. "Temperature and Circulation Anomalies in the Eastern Canadian Arctic, Summer 1946–76," 1979. Mf., Univ. Microfilms.

Rogers, Jeffery C. "The North Pacific Oscillation and Eigenvectors of Northern Hemisphere Atmospheric Circulation During Winter," 1979. Mf., Univ. Microfilms.

Master's:

Dow, Vicki M. "Cartographic Analysis and Development of Legend and Prototype Map of Multiple Geomorphic Hazards," 1979.*

Kuntz, David W. "Real Estate Agents and the Physical Geography of Place," 1979.*

Loranger, Steven R. "Landtype Analysis in the Southern San Juan Mountains," 1979.*

Minick, Nancy L. "The Identification of Consumer Attitudes Toward Public Mass Transportation: A Case Study of Denver, Colorado," 1979.*

Moritz, Richard E. "Synoptic Climatology of the Beaufort Sea Coast, Alaska," 1979.*

Rauhauser, Donna S. "Managers and Users of Cross-Country Ski Areas in Arapahoe-Roosevelt National Forest: A Study of Resource Perception, Managerial Characteristics and User Motivations," 1979.*

Watson, Richard V. "Activity Centers and Auto Dependence: The Villa Italia Activity Center," 1979.*

Zimmerman, Margaret L. "Environmental Preference Migration: An Empirical Study," 1979.*

Columbia University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1916 GRADUATE PROGRAM FOUNDED: 1920

DEGREES OFFERED: M.A., M.Phil., Ph.D.

GRANTED 7/1/79–6/30/80: 4 M.A., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 23 Masters 20 Ph.D.
NOT IN RESIDENCE: 6 Masters 13 Ph.D.

CHAIRMAN: Robert A. Lewis

FOR BULLETIN AND FURTHER INFORMATION WRITE TO: Professor Robert A. Lewis, 1028 International Affairs Building, Columbia University, 420 West 118th Street, New York, New York 10027
Telephone (212) 280–4641

PROGRAMS AND RESEARCH FACILITIES: The Department offers comprehensive and rigorous preparation for research and teaching in geography, with particular strength in the following areas: Resource Studies, Environmental Management, Economic-Urban Geography, Remote Sensing Techniques, and Regional Studies. The expanding opportunities for geographers in these and other areas make Columbia's resources especially attractive.

The Department is housed in a new building with special class, laboratory, seminar, and student-study facilities for geography. It shares in the resources and facilities of a great university and a great city. The Department has a close relationship with the Goddard Institute for Space Studies and its remote sensing facilities.

Requirements for the M.A. degree consist of eight one-term courses including seminars, certification of proficiency in quantitative methods, and the writing of a research paper.

Students preparing for the Ph.D. degree complete four additional terms of course work, fulfill the language requirement, if any, for their area of specialization, pass written and oral qualifying examinations in one major and two minor fields, and write and successfully defend a doctoral dissertation.

Majors offered: Environmental Science (including Biogeography, Climatology, Conservation, Geomorphology, Hydrology, Oceanography, Pedology); Social Geography (including Cultural Geography, Economic Geography, Medical Geography, Historical Geography, Land Use and Transportation, Location Theory and Regional Analysis, Political Geography, Population Geography, Spatial Organization, Urban Geography); Resources Geography (including Conservation Theory, Energy, Food Supply, World Resources); and Regional Geography (including Africa, Latin America, U.S.S.R.).

Minors offered: in any of the above fields and in research methods, such as remote sensing techniques, spatial analysis, or cartography, or in a cognate discipline.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:

Academic Plan: Emphasis on Ph.D. degree, normally requiring 4 to 7 years. M.A. degree program also available, usually requiring 1 to 2 years. University operates on semester system. A new part-time M.A. program has been added. *Admission Requirements:* A baccalaureate or master's degree including no less than three years of undergraduate liberal arts courses. Recommended undergraduate training: a balanced program of study without excessive specialization in geography. The Department does not require an undergraduate major in geography. *Financial Aid:* A comprehensive program including fellowships, teaching and research assistantships, and loans.

Society of Woman Geographers Fellowship in Geography. One or more to women geography students; provide tuition, fees, and a stipend.

Fellowship application deadline is January 10.

STAFF:

Stephen R. Baker, M.D., Einstein, 1968, Lecturer—medical geography
Samuel N. Goward, Ph.D., Indiana State, 1978, Lecturer—remote sensing, air photo interpretation
William A. Hance, Ph.D., Columbia, 1949, Professor—Africa, economic, energy
Paul E. King, Ph.D., Ohio State, 1972, Assistant Professor—urban, social
Robert A. Lewis, Ph.D., Washington, 1964, Professor—U.S.S.R., population
Sara L. McLafferty, Ph.D., Iowa, 1979, Assistant Professor—economic
Miklos Pinther, B.S., Columbia, 1967, Lecturer—cartography
Garry F. Rogers, Ph.D., Utah, 1980, Assistant Professor—environment, biogeography, climatology
Theodore Shabad, Ph.D., Columbia, 1976, Lecturer—resources of the U.S.S.R.
Kempton E. Webb, Ph.D., Syracuse, 1958, Professor—Latin America, cultural
Warren E. Yasso, Ph.D., Columbia, 1964, Associate Professor—geomorphology, oceanography
Leonard Zobler, Ph.D., Columbia, 1953, Professor—resource use, soils, hydrology

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Lawrence, Ivy E. "Coca Production and Use in Bolivia: Prospects for Control," 1980.
Lehman, Andrew T. "Resource Recovery in the United States," 1980.
Rosengarten, Lynn. "An Essay on Environmental Preference, Exploration, and Discovery with a Case Study in the Geography of Perceived Dangers in Manhattan," 1979.
Weinberg, Robert Jay. "Alternative Land Use Technologies and Suburban Lifestyles for the New Jersey Pine Barrens," 1979.

University of Delaware

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1971

DEGREES OFFERED: M.A., M.S.; Ph.D. in Applied Science-Climatology

GRANTED 7/1/79–6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 12 Masters
NOT IN RESIDENCE: 5 Masters

CHAIRMAN: John R. Mather

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Laurence S. Kalkstein, Graduate Coordinator, Department of Geography, University of Delaware, Newark, Delaware 19711
Telephone (302) 738-2294

PROGRAMS AND RESEARCH FACILITIES: The Graduate Program provides the opportunity for a select number of Masters and Doctoral students to interact frequently with a staff whose interests touch upon one of two particular themes: 1) Climatology. Emphasis is placed on energy and water balance aspects of climatology and their application to environmental problems. The faculty's research interests include climatic modelling, human impact upon energy and moisture exchanges, and applied studies in agriculture, biogeography, and micro-climatology. 2) Urban landscapes and planning. The Program focuses on historic development, spatial organization, and human behavior in urban landscapes, as well as cultural attitudes and philosophies of urban civilization. Interdisciplinary work with other departments and the College of Urban Affairs is encouraged. Computer facilities are primarily supported by a Burroughs B7700 system with advanced graphics capabilities, and users also have access to HP2000, PDP 11/70 and DEC 10 systems. The Department has three on-line terminals that connect to all campus computers. The University's Center for Climatic Research has been established in the Department, which also houses the Office of the State Climatologist for Delaware. Facilities include instruments for microclimatic investigations, a cartographic reproduction laboratory, and the extensive library holdings of the C. W. Thornthwaite Laboratory of Climatology. An interdisciplinary Ph.D. program in Applied Sciences-Climatology, which is fundamentally quantitative with an emphasis on the understanding, development, and use of analytical, numerical, and/or statistical analogues to climate and climatic processes, is also administered by the Department. *Publications in Climatology* jointly published by the Center for Climatic Research and the Thornthwaite Laboratory of Climatology.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on a semester system. General admissions requirements are an undergraduate index of 2.5 or more and combined GRE scores of at least 1050;

the Department will consider qualified applicants without previous background in geography, though additional preliminary work may be required. Financial aid is available through research assistantships to highly qualified applicants.

STAFF:

Edmunds V. Bunkse, Ph.D., UC, Berkeley, 1973, Associate Professor—cultural-historical, landscape aesthetics, urban, U.S.

Richard T. Field, M.S., Chicago, 1962, Lecturer—micro-climatology, energy budgeting in human and natural systems, ecology

Franklin E. Gossette, Ph.D., UCLA, 1979, Assistant Professor—urban, social, China

Laurence S. Kalkstein, Ph.D., Louisiana State, 1974, Assistant Professor—biogeography, conservation, ecological problems, climatology

Vytautas Klemas, Ph.D., Technical University, Braunschweig, 1965, Professor (joint appointment with Marine Studies)—remote sensing, environmental monitoring, coastal resource management

John R. Mather, Ph.D., Johns Hopkins, 1951, Professor and Chairman, Director, Center for Climatic Research—applied climatology, meteorology, water resources

Thomas C. Meierding, Ph.D., Colorado, 1977, Assistant Professor—climatic geomorphology, cartography, air photo interpretation

Peter W. Rees, Ph.D., UC, Berkeley, 1971, Associate Professor and Associate Dean, College of Arts and Science—urban, historical-economic, Latin America

Roger S. Ulrich, Ph.D., Michigan, 1973, Associate Professor—behavioral, urban, visual landscapes

Cort J. Willmott, Ph.D., UCLA, 1977, Assistant Professor (joint appointment with Marine Studies)—physical climatology, quantitative methods

University of Denver

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1947

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 4 M.A., 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 8 M.A. 1 Ph.D.
NOT IN RESIDENCE: 3 M.A. 0 Ph.D.

CHAIRPERSON: Laurance C. Herold

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Laurance C. Herold, Chairman, Department of Geography, University of Denver, Denver, Colorado 80208
Telephone (303) 753-2513

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography at the University of Denver offers graduate work in the following areas of concentration: geomorphology, urban and regional studies, and social geography. In each of these areas, stress is placed on interdisciplinary studies; the Department enjoys close working relations with other departments within the University. Cooperative programs of work-study can be arranged occasionally with local planning agencies, and there is opportunity for cooperative research in physical geography with locally-based federal agencies.

The Department is housed in a group of offices, classrooms, and special purpose rooms in Pioneer Hall. Library and map resources include those of the Department, the University, and the Denver metropolitan area. Field work and in-service experiences are encouraged.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Denver operates on a quarter system.

Candidates for graduate degrees in the Department of Geography are required to take the Graduate Record Examination as part of their admission requirements. Among the criteria applied in determining eligibility for admission are an acceptable undergraduate scholastic record, satisfactory scores on the Aptitude Test for the Graduate Record Examination, and appropriate references.

Application for the admission to graduate study is advisable at least two quarters prior to the expected date of enrollment.

A limited number of University teaching and research assistantships as well as tuition scholarships are available. Assistantships carry a stipend with remission of tuition.

STAFF:

John E. Costa, Ph.D., Johns Hopkins, 1973, Associate Professor—fluvial geomorphology, environmental geology

Richard F. Hadley, M.A., Minnesota, 1950, Adjunct Professor—geomorphology, erosion and sedimentation, hydrology

Laurance C. Herold, Ph.D., Southampton, 1968, Associate Professor and Chairman—systematic specialization, cultural, regional, British Isles, American Southwest and Northern Mexico

David B. Longbrake, Ph.D., Iowa, 1972, Associate Professor—urban, urban and regional planning, land use and development, quantitative methods

Robert D. Rudd, Ph.D., Northwestern, 1953, Professor—physical, remote sensing, climatology

Terrence J. Toy, Ph.D., Denver, 1973, Associate Professor—climatic geomorphology, quantitative, hydrology

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Combs, Herbert Lee, Jr. "County Land Use Planning: An Appraisal, with a Proposed Methodology for Evaluating Its Spatial Component," 1979.

Kuhaida, Andrew Jerome, Jr. "Mass Movements Resulting from Intense Rainfall, Douglas County Colorado: A Morphometric Analysis," 1980.

Viterito, Arthur. "An Evaluation of the Thiessen Polygon Method of Determining Areal Precipitation Depths," 1980.

Master's:

Cheeseman, Valerie Christine. "Critical Environmental Area Information as a Planning Tool in Rappahannock County, Virginia—Baseline 1977," 1979.

Duru, Titus Udunna. "Spatial Variations in the Commission of Serious Class I Crimes in Denver for 1977," 1979.

East Carolina University

DEPARTMENT OF GEOGRAPHY

GRADUATE PROGRAM FOUNDED: 1964

DEGREES OFFERED: M.A., M.A.Ed.

GRANTED 7/1/79–6/30/80: 4

GRADUATE STUDENTS IN RESIDENCE: 10
NOT IN RESIDENCE: 5

CHAIRMAN: Ennis L. Chestang

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Richard A. Stephenson, Graduate Advisor, Department of Geography, East Carolina University, Greenville, North Carolina 27834
Telephone (919) 757–6230

PROGRAMS AND RESEARCH FACILITIES: The Department offers two Masters degrees, the M.A. and the M.A.Ed. There are thesis and non-thesis programs for both degrees.

The Departmental map library is a depository for U.S.G.S., Defense Mapping Agency, National Ocean Survey, and, on temporary basis, Aeronautical Charts. There is a sizeable air photo collection which concentrates on North Carolina and the other Southeastern States. Separate laboratories for physical geography, air photo interpretation, quantitative methods, and cartography are available. The Institute for Coastal and Marine Resources, in which the Department participates, offers additional support, facilities, and courses for graduate students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The graduate program is open to students with either an undergraduate major in geography or satisfactory course work in the field. Students with limited backgrounds in geography may be accepted under certain conditions. Requirements for admission are set forth in the Graduate Bulletin, which is available from the Graduate School.

Assistantships are available to qualified students. The stipend is normally $2650 per academic year. A limited number of Special Talent assistantships to aid in defraying out-of-state tuition are available. They are awarded by invitation. A prospective Special Talent student should have a transcript and two letters of recommendation sent to the Graduate Advisor. This will permit a determination to be made whether to invite the student to apply for a Special Talent Assistantship.

STAFF:

Simon Baker, Associate Professor, B.S., M.S. Arizona, Ph.D. Clark
Ennis L. Chestang, Professor and Chairperson, B.S., M.S. Florida State, Ph.D. Indiana
Robert E. Cramer, Professor, A.B. Ohio, M.S., Ph.D. Chicago
William W. Hankins, Associate Professor, A.B., M.S. (Planning), M.S. (Geography) Florida State
Edward P. Leahy, Associate Professor, B.M.E. Virginia, M.B.A. Columbia, Ph.D. Florida
Palmyra Leahy, Assistant Professor, A.B., Licenciado, Minas Gerais (Brazil)
Janet H. Petterson, Assistant Professor, A.B. Mount Holyoke, M.A. Ohio State, Ph.D. Florida
Philip Shea, Assistant Professor, B.A. Middlebury, M.A., Ph.D. Michigan State
Donald Steila, Associate Professor, B.S., M.A. Kent State, Ph.D. Georgia
Richard A. Stephenson, Professor, B.A. Kent State, M.S. Tennessee, Ph.D. Iowa
Douglas C. Wilms, Associate Professor, B.A., M.A. Missouri, Ph.D. Georgia
Malatu Wubneh, Assistant Professor, A.B. Haille Selassie, M.A., Ph.D. (Planning) Florida State
Charles Ziehr, Lecturer, B.A. Arkansas, M.S. South Carolina

TITLES OF THESES COMPLETED 7/1/79-6/30/80:
Master's:

Klingman, Thomas B. "The Character and Evolution of Black Urban Commercial Land Use in Greenville, North Carolina," 1980.
Petterson, Lynne M. "The 1977 Drought in the Southeastern United States," 1980.
Wall, Everette T. "Licensed Commercial Shooting Preserves in Eastern North Carolina: A Study in Recreational Land Use," 1980.

East Tennessee State University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1951 GRADUATE PROGRAM FOUNDED: 1960

DEGREES OFFERED: M.A.

GRANTED 7/1/79-6/30/80: 6

GRADUATE STUDENTS IN RESIDENCE: 13
NOT IN RESIDENCE: 3

CHAIRPERSON: Donald H. Poole

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Graduate Committee, Department of Geography and Geology, East Tennessee State University, Johnson City, Tennessee 37601
Telephone (615) 929-4360

PROGRAMS AND RESEARCH FACILITIES: The department offers a major concentration in the following areas: Urban and Region Planning, Physical Geography, and In-Service Teacher Training.

A well-equipped cartographic and air photo-remote sensing laboratory is present in a Departmental Research Annex. A map depository is housed in the University library. In addition, the library subscribes to many hundreds of periodicals in geography and in supporting fields.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The Department of Geography offers graduate programs leading to the Master of Arts degree. Three types of programs in geography may be followed: a professional program emphasizing Urban and Regional Planning, a professional program in Physical Geography, and a regional specialization for persons seeking training for teaching in the elementary and secondary school systems.

Students determine their own curriculum, depending on interests, with the help of the advising committee; however, the following four graduate courses are required of all students: Field Methods, Quantitative Techniques, Evolution of Geographic Thought, and Research in Geography.

The Department of Geography urges its graduate students to participate in the cooperative educational experience at East Tennessee State University. By doing so the student not only can work but can gain valuable experience in his desired field of expertise.

Minimum degree requirements for the M.A. are: 1) 32 semester hours of geography which includes 3 papers of a directed research nature, 2) 27 semester hours of geography plus a thesis (3 semester hours), 3) A minimum of 21 semester hours of geography following a thesis or non-thesis option and 9 semester hours in a chosen minor field.

University teaching and research assistantships are available. Selection for admission and financial assistance will be based on the applicant's academic record, letters of recommendation, GRE scores, and a statement concerning professional goals.

STAFF:

Clifton C. Carpenter, M.A., Kentucky, 1958, Associate Professor—geomorphology, political, Soviet Union

George A. Finchum, Ed.D., Tennessee, Professor—teaching of geography

Charles Gunter, M.A., Tennessee, 1963, Assistant Professor—historical, general geography, United States, geography of Southern Appalachia

Michael P. Marchioni, Ph.D., Cincinnati, 1971, Associate Professor—urban geography and planning, location theory, history and philosophy of geography

Robert W. Peplies, Ph.D., Georgia, 1968, Professor—remote sensing, soils, settlement, Europe, history and philosophy of geography

Donald H. Poole, Ph.D., Georgia, 1969, Professor and Chairman—physical, geomorphology, climatology, photo interpretation, North America, Southern Appalachians

Chester T. Stout, M.A., East Tennessee State, 1962, Associate Professor—general geography, economic, Africa, United States

Robert L. Wyatt, M.A., East Tennessee State, 1964, Assistant Professor—agricultural economic geography, South Africa, conservation of natural resources

Eastern Kentucky University

DEPARTMENT OF GEOGRAPHY AND PLANNING

DATE FOUNDED: 1928 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A., M.A. with specialization in Planning, specialization in Community Development, M.A. in Education

GRANTED 7/1/79–6/30/80: 2

GRADUATE STUDENTS IN RESIDENCE: 3
NOT IN RESIDENCE: 6

CHAIRMAN: Ronald L. Marionneaux

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Ronald L. Marionneaux, Department of Geography and Planning, Eastern Kentucky University, Richmond, Kentucky 40475
Telephone (606) 622-2251

PROGRAMS AND RESEARCH FACILITIES: Five major programs are offered at the Masters level. They are: Planning, Community Development, Cartography-Remote Sensing, General, and Education.

In addition to special teaching equipment, such as a large collection of wall maps and modern visual aids, the departmental spaces include laboratories housing cartographic, climatic, photographic, and photogrammetric equipment and data for instruction and research. A department map library is available for student convenience and study. The department maintains a weather station.

Continued expansion of departmental capabilities is expected. Departmental programs are aided by the Geographical Studies and Research Center. The Center, while independent of the Department, is closely allied and provides research opportunities for graduate students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Academic plans and admission requirements are outlined in the Graduate Bulletin of Eastern Kentucky University. Graduate assistantships of $2500 and $2800 are available. The University is on a semester system.

STAFF:

William G. Adams, Ph.D. candidate, Kentucky, Associate Professor—data acquisition, Latin America, physical

Timothy J. Kubiak, Ph.D., Michigan, 1973, Associate Professor—planning, economic

Ronald L. Marionneaux, Ph.D., Indiana, 1970, Professor and Chairman—planning, urban, environmental

Dale R. Monsebroten, Ph.D., Indiana State, 1973, Associate Professor—physical, climate, environmental planning

Dennis E. Quillen, Ph.D., Tennessee, 1975, Associate Professor—transportation, economic, planning

Joseph R. Schwendeman, Jr., Ph.D., Indiana, 1966, Professor (part-time)—physical, North America, climate

Carl W. Spurlock, Ph.D., Oklahoma, 1972, Associate Professor—economic, land use, planning, regional development

Wilma J. Walker, Ph.D., Kentucky, 1978, Associate Professor—cultural, political, Africa

Eastern Michigan University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1903 GRADUATE PROGRAM FOUNDED: 1927

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/79–6/30/80: 8

GRADUATE STUDENTS IN RESIDENCE: 18

HEAD: Elwood J. C. Kureth

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Robert Ward, Department of Geography and Geology, Eastern Michigan University, Ypsilanti, Michigan 48197
Telephone (313) 487-0218

PROGRAMS AND RESEARCH FACILITIES: The Master's degree in geography may be completed by choosing Option One (30 semester hours) or Option Two (32 semester hours), each of which is described below.

All graduate students are required to pass a comprehensive oral examination as part of the Master's degree program. The oral examination, conducted by a committee of the graduate faculty, will cover the field of geography and will emphasize the student's field of interest.

Option One: Students whose life/career goals include research activity may elect to complete a thesis (representing six semester hours credit). The thesis topic and design are developed by the Master's candidate with the advice of a departmental graduate faculty member. The completion of a thesis is especially recommended as a valid learning experience for those who intend to pursue further advanced degrees, but is also useful for those who seek employment with organizations that perform research functions.

Option One requires the completion of 30 semester hours broken down as follows: 18–24 hours in geography, 0–6 hours in approved cognates, and the remaining 6 hours in thesis credit.

Option Two: This option is designed to serve individuals who may prefer additional course work and/or work experience as a substitute for thesis research and writing. This option is especially recommended for those whose career plans would benefit from an off campus internship experience. It also offers scope to in-service individuals (planners, soil scientists, or teachers) to reorganize and apply the subject matter of the work experience to an E.M.U. course under the supervision of a departmental graduate faculty member who evaluates the student's performance.

Of the 32 hour total a maximum of six hours may be taken as cognate hours outside the department. A requirement of this option is the successful completion, while in residence at E.M.U., of two hours achieved through the composition of a paper of publishable quality. Graduate faculty in the department must be consulted in the initiation, design, and completion of the paper. A graduate faculty member will also assess the completed paper.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* Quarter System. *Admission Requirements:* Undergraduate Grade Average of B or better. *Financial Aid:* Departmental graduate assistants and teaching fellows ($3000 to $3200).

STAFF:

Paul O. Buckholts, Ph.D., Harvard, 1957, Professor—political, Soviet Union

Allen Cichanski, Ph.D. candidate, Ohio State, Assistant Professor—mineralogy, petrology, earth science education

E. Lorene Hall, M.S., Eastern Michigan, 1960, Associate Professor—Michigan, the American Midwest, geographic education

George M. Howe, Ph.D., Clark, 1956, Professor—weather and climate

Eugene Jaworski, Ph.D., Louisiana State, 1971, Associate Professor—geomorphology, soils, cartography, remote sensing

Elwood J. C. Kureth, Ph.D., Michigan, 1971, Professor—world regions, location analysis, Anglo-America

Horace A. MacMahan, Jr., Ed. D., Colorado, 1967, Professor—earth science, methods

Robert B. Mancell, Ph.D., Michigan, 1974, Associate Professor—economic, urban, Latin America, historic preservation

James R. McDonald, Ph.D., Illinois, 1964, Professor—human migrations, geographic thought, Europe

Marshall S. McLennan, Ph.D., UC, Berkeley, 1973, Associate Professor—cultural, historic preservation, settlement

Andrew A. Nazzaro, Ph.D., Michigan State, 1974, Associate Professor—cultural, Africa, medical, rural development

Lawrence Ogden, D.Sc., Colorado School of Mines, 1958, Professor—earth science education, economic geology

Carl F. Ojala, Ph.D., Georgia, 1972, Associate Professor—economic, cultural, North America

Ross N. Pearson, Ph.D., Michigan, 1954, Professor—geographic education, Latin America

C. Nicholas Raphael, Ph.D., Louisiana State, 1968, Professor—geomorphology, coastal zones

Ranjit Tirtha, Ph.D., North Carolina, 1961, Professor—world regions, population, Asia, urban planning

Daniel S. Turner, Ph.D., Wisconsin, 1948, Professor—economic geology, earth science, stratigraphy, glacial geology

Robert M. Ward, Ph.D., Michigan, 1971, Associate Professor—cartography, natural environmental hazards, land use

Florida Atlantic University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1964 GRADUATE PROGRAM FOUNDED: 1972

DEGREES OFFERED: M.A. (cooperative Ph.D. with University of Florida and Florida State)

GRANTED 7/1/79-6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 6
NOT IN RESIDENCE: 4

CHAIRPERSON: David R. Lee

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Alan K. Craig, Graduate Advisor, Department of Geography, Florida Atlantic University, Boca Raton, Florida 33431
Telephone (305) 395-5100

PROGRAMS AND RESEARCH FACILITIES: Florida Atlantic University is an upper division and graduate university in the state system, offering advanced training at the junior, senior, master's, and doctorate levels. The facilities available to geographers include fully-equipped cartography and remote sensing interpretation laboratories containing NASA Earth Resources imagery and more than 23,000 maps; a quantitative techniques laboratory; complete computer facilities with printer and plotter output; a darkroom; and an 800,000 item library.

Departmental strengths are in the following areas: urban studies, planning, Latin America, biogeography, remote sensing, and environmental perception. Strong programs in other physical and social science departments provide for cognate and inter-departmental work.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: A GRE score of 1000 and an upper division GPA of B are required for admission. Out-of-state tuition waivers are available. M.A. requirements: 45 credits (20 of which are geography seminars); preliminary oral examination; thesis. Any geography, foreign language, or statistics deficiencies are additional to the 45 credit minimum.

STAFF:

Alan Craig, Ph.D., Louisiana State, 1966, Associate Professor—Latin America, biogeography, Florida

James Latham, Ph.D., Pennsylvania, 1959, Professor—remote sensing, urban, planning, Anglo-America

David Lee, Ph.D., UCLA, 1967, Associate Professor and Chairperson—Africa, cultural, cartography, geography of women

Ronald Schultz, Ph.D., Washington, 1971, Associate Professor—economic, urban, quantitative

Robert Tata, Ph.D., Syracuse, 1968, Associate Professor—economic development methodology, Latin America

Florida State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1929 GRADUATE PROGRAM FOUNDED: 1930

DEGREES OFFERED: M.S., M.A. (Cooperative Ph.D. with University of Florida)

GRANTED 7/1/79-6/30/80: 10

GRADUATE STUDENTS IN RESIDENCE: 21
NOT IN RESIDENCE: 9

CHAIRMAN: Patrick O'Sullivan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Coodinator, Department of Geography, Florida State University, Tallahassee, Florida 32306
Telephone (904) 644-1706

PROGRAMS AND RESEARCH FACILITIES: The requirements for a Master's degree in Geography can be met by completing either (1) a thesis and 45 quarter hours or (2) a research report and 48 quarter hours or (3) an interdepartmental program for junior and community college instructors. Whichever mode is selected, one of five substantive curricular tracks can be followed: land use analysis, natural resource and environmental management, rural settlement and agriculture, cities and regions, transport. The Department cooperates with the University of Florida in offering a Ph.D. program (participation requires prior admission into the University of Florida Ph.D. program in Geography).

The University has a rich variety of support courses and the library houses a good collection of maps, atlases and data sources. The Department's research facilities include a cartography laboratory. Computing time is available on the University's CDC Cyber 73. Proximity to state and regional agencies in Florida's capital city is advantageous for graduate research. The Florida Resources and Environmental Analysis Center (housed within the Department of Geography) provides opportunities for funded research for both graduate students and faculty.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admission Requirements:* An undergraduate major in geography is not required; rather, students with majors in other disciplines are encouraged to apply with the understanding that minimal deficiencies must normally be rectified for completion of the program. Applicants must submit evidence of strong academic performance in their undergraduate work and must have taken the general aptitude test of the Graduate Record Examination. Undergraduate training in mathematics, statistics, or computer science is desirable. Quarter System. *Financial Aid:* University Fellowships—Stipend for four quarters is $3600. Department of Geography Graduate Assistantships—Stipend is $3200-$4800 for three quarters. Both may carry a waiver of out-of-state fees. *Other Financial Aid:* Research Assistantships and hourly wage employment in funded research projects are available in the Florida Resources and Environmental Analysis Center.

GRADUATE FACULTY:

Earl J. Baker, Ph.D., Colorado, 1974, Associate Professor—behavioral analysis, perception of natural hazards

William R. Brueckheimer, Ph.D., Michigan, 1954, Professor—conservation, resource problems, political, recreation

Harrison V. Chase, M.A., Michigan, 1940, Associate Professor—oceanic resources, public lands, Far East

Edward A. Fernald, Ph.D., Michigan State, 1968, Professor—geographic education, land and resource use, Florida

Harold McConnell, Ph.D., Iowa, 1964, Professor—quantitative methods, geomorphology

Patrick O'Sullivan, Ph.D., London School of Economics, 1967, Professor—transport, economic

Donald J. Patton, Ph.D., Harvard, 1949, Professor—resources, environmental perception, economic, Anglo-America

Burke G. Vanderhill, Ph.D., Michigan, 1956, Professor—settlement, historical landforms, Canada, United States, Europe

Morton D. Winsberg, Ph.D., Florida, 1958, Professor—geographic thought, agricultural, research methods, computer graphics, Latin America

Additional faculty will be appointed.

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Green, Jim B. "Military Geography: Tactical Terrain Analysis," 1979.

Miller, Craig. "Extension of the National Land System to Colonial West Florida: The Evolution and Influence of Colonial Land Policy." 1979.

University of Florida

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1941 GRADUATE PROGRAM FOUNDED: 1948

DEGREES OFFERED: M.A., M.S., M.A.T., M.S.T., Ph.D.

GRANTED 7/1/79–6/30/80: 3 Masters, 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 12 Masters, 12 Ph.D.
NOT IN RESIDENCE: 1 Masters, 5 Ph.D.

CHAIR: Robert B. Marcus

FOR CATALOG AND FURTHER INFORMATION WRITE TO: David L. Niddrie, Graduate Coordinator, Department of Geography, University of Florida, Gainesville, Florida 32611
Telephone (904) 392-0495

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts degree may be taken with emphasis on economic or cultural geography, or the student may elect a Master of Science degree with emphasis on physical geography. The Masters degree is required for entry to the Ph.D.

The Master of Arts and Master of Science in Teaching degrees may be earned in geography. These non-thesis degrees are designed for persons who intend to teach in community colleges or to go into planning.

The Doctor of Philosophy degree is offered with specialization in economic geography, particularly agricultural geography, environmental studies, the geography of resource use, and urban geography and with regional specialization in Southeastern United States, Latin America, and Africa south of the Sahara. This degree program operates cooperatively with Florida State and Florida Atlantic Universities. Under the program students may take work on any campus.

Of many university-wide facilities, the following deserve special mention: the Centers for Latin American and African Studies; the University Library with its large map and Latin American collection; the Hume Agricultural Library, which is one of the best such libraries in the South; the Latin American Data Bank; the Computing Center; the Urban and Regional Studies Center; the Water Resources Research Center; and participation in the Organization for Tropical Studies (OTS).

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Florida operates on the quarter system. In August 1981 the University of Florida will change to the modified semester system. Admission to the Graduate School requires (1) presentation of a baccalaureate degree from an accredited college, (2) a B average or its equivalent in prior junior or senior level undergraduate work, (3) a minimum combined score of 1,000 on the aptitude test of the Graduate Record Examination (GRE). Three letters of recommendation are required by the Department.

Applications for admission to the University and the Graduate School must be made not later than ten weeks before the proposed date of entry. The necessary information and forms, including requests for housing, may be obtained from the Office of Admissions, University of Florida. Applicants may at the same time request a copy of the Graduate School Catalog. Foreign students should direct their requests to the Adviser to Foreign Students.

The University offers graduate fellowships and assistantships ranging from $3600 to $5400 for nine months; waivers of out-of-state fees of $900 may be arranged. NDEA Title VI Fellowships may be available for students interested in Latin American Studies and in African Studies.

The Department of Geography also offers one-third time assistantships which provide a stipend of $3600 for nine months; waivers of out-of-state fees of $900 may be arranged. Service generally consists of teaching and infrequently research duties.

Applications for fellowships and assistantships should be received before February 1.

STAFF:

Elizabeth F. Abbott, Ph.D., Florida, 1972, Assistant Professor—conservation, physical, climatology

Gustavo A. Antonini, Ph.D., Columbia, 1968, Professor—Latin American Studies, geomorphology

HelenJane Armstrong, Ph.D., Oregon State, 1977, Associate Librarian—map use and interpretation, geographical bibliography

Cesar N. Caviedes, D.Sc., Freiburg, 1969, Professor—social, Latin America, Chile

John R. Dunkle, Ph.D., Clark, 1955, Professor—cartography, political

Herbert C. Dupree, Ph.D. candidate, Michigan, Assistant Professor—urban, environmental perception, cultural

Kay M. Eoff, Ph.D., Florida, 1962, Assistant Professor—conservation, energy resources, astronomy

James A. Henry, Ph.D., Kansas, 1978, Assistant Professor—climatology, physical, remote sensing

Virginia R. Hetrick, Ph.D., Washington, 1974, Assistant Professor—urban, transportation, quantitative, public policy

Ary J. Lamme III, Ph.D., Syracuse, 1969, Associate Professor—historical, Anglo-America, geographic thought

Robert C. Lindquist, Ph.D., Utah, 1980, Assistant Professor—geomorphology, air photo interpretation, remote sensing

Robert B. Marcus, Ed.D., Florida, 1956, Professor and Chair—Florida, physical, geomorphology, geographic education

David L. Niddrie, Ph.D., Manchester, 1965, Professor—Southern Africa, Caribbean, agricultural, land use

Carl N. Olsson, Ph.D., Florida, 1970, Associate Professor—climatology, energy resources, astronomy

Louis A. Paganini, Ph.D., Florida, 1970, Associate Professor—Latin America, cultural, physical, biogeography

Earl C. Pirkle, Ph.D., Cincinnati, 1956, Professor and Associate Chair—mineral resources, geomorphology

Hugh L. Popenoe, Ph.D., Florida, 1960, Professor and Director of International Programs—tropical land use, tropical ecology

Leonidas H. Roberts, Ph.D., Florida, 1958, Professor—physical, astronomy

Herbert R. A. Schaeper, Ph.D., Florida, 1969, Assistant Professor—remote sensing, energy use, Jamaica

Carl W. Spurlock, Ph.D., Oklahoma, 1972, Associate Professor—economic, land use and resource analysis, geographic information systems

PROFESSORS EMERITI:

Raymond E. Crist, Ph.D., Grenoble, 1937, Research Professor Emeritus—Caribbean, Andean America, Mediterranean basin, land tenure use

Clark I. Cross, Ph.D., Washington, 1951, Professor—physical, resource use, air photo interpretation, U.S.S.R.

Shannon McCune, Ph.D., Clark, 1939, Professor Emeritus—eastern Asia, economic, political

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Perez-Luna, Agapito. "Factors Associated with the Diffusion of Innovations in Rice Cultivation in the Dominican Republic," 1979. Mf., University Microfilms.

Master's:

Ramsey, Glenn T. "The Impact of Agrarian Reform on the Department of Meta, Colombia," 1980. Mf., University Microfilms.

Stayert, Paul R. "A Symbology Series for Mapping Classified LANDSAT Data," 1980. Mf., University Microfilms.

Wenzel, Karen L. "The Relationship between the Location of Markets for Secondary Materials and the Existence of a Separate Recycling Program," 1979. Mf., University Microfilms.

George Mason University

DEPARTMENT OF PUBLIC AFFAIRS

DATE FOUNDED: 1972 GRADUATE PROGRAM FOUNDED: 1978

DEGREES OFFERED: M.S. in Geographic and Cartographic Sciences

GRANTED 7/1/79-6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 8
NOT IN RESIDENCE: 20

CHAIRPERSON: Dr. Robert P. Clark

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Admissions Office, George Mason University, Fairfax, Virginia 22030
Telephone (703) 323-2104

PROGRAMS AND RESEARCH FACILITIES: The M.S. Degree is organized around two tracks: Cartography and Applied Geography. Cartography students may choose the Topographic or Thematic Specializations; Geography students may choose the Human Geography or Physical Geography Specializations.

The Geography Program attempts to utilize the vast cartographic and geographic resources of the Washington, D.C. area through the hiring of adjunct faculty who are specialists in their field, and by allowing students access to state-of-art cartography at off-campus locations.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Most graduate courses are offered evenings. Many students are employed full or part-time in geography related jobs.

Applicants should have a bachelor's degree in geography or cartography or equivalent with a grade point average of 3.0 (on a 4.0 scale) in their last two years of undergraduate work. Other applicants may be considered for provisional or non-degree status.

Various scholarships and loans are available through the Financial Aid Office (703) 323-2176.

STAFF:

Alice C. Andrews, Ed.D., George Washington, 1975, Associate Professor—cultural, population, Soviet Union

Carleton W. Cox, Ph.D., Wisconsin-Madison, 1977, Assistant Professor and Program Director, Geography—cartography, photogrammetry, remote sensing

James W. Fonseca, Ph.D., Clark, 1974, Associate Professor— political, Latin America, urban

Walter R. Hager, M.P.A., Texas, 1970, Visiting IPA Fellow—environmental impact, resource management

G. Harry Stopp, Jr., Ph.D., Louisiana State, 1975, Assistant Professor—land use, computer cartography, environmental management

Jean-Claude Thomas, Ph.D., University of Aix Marseille, 1967, Associate Professor—remote sensing, urban, Europe

ADJUNCT FACULTY:

Eric Anderson, Ph.D., Northwestern, 1978—geographic information systems

Robert Davis, M.A., Arizona State, 1968—world regional

Nicholas Dima, Ph.D., Columbia, 1973—Soviet Union

John Koutsandreas, M.T.S., Catholic, 1975—environmental impact

Paul D. McDermott, M.A., Washington, 1964—world regional

Roger L. Payne, M.A., East Carolina, 1972—environmental management

Charles F. Roberts, M.S. Meteorology, Massachusetts Institute of Technology, 1954—climatology, meteorology

Robert Smith, Ph.D., North Carolina, 1979—political

Alfred Taylor, M.S., Wisconsin-Madison, 1949—physical

George Washington University

DEPARTMENT OF GEOGRAPHY AND REGIONAL SCIENCE

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1949

DEGREES OFFERED: M.A., M.A. Ed.

GRANTED 7/1/79–6/30/80: 3

GRADUATE STUDENTS IN RESIDENCE: 10
NOT IN RESIDENCE: 5

CHAIRMAN: Eldor Pederson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Eldor Pederson, Chairman, Department of Geography, George Washington University, Washington, D.C. 20052
Telephone (202) 676–6185

PROGRAMS AND RESEARCH FACILITIES: Graduate offerings and research guidance strongly reflect department interests in urban geography, population geography, regional development, transportation, resource management, climatology, political geography, and Latin America.

Flexibility and breadth are brought to the graduate program by courses available through the Washington Consortium of Universities, other departments of the Graduate School of Arts and Sciences, the Latin American Studies program and the Sino-Soviet Institute.

The location of the University in central Washington, D.C. provides easy access to libraries of the U.S. Government and many other agencies. The University's Computer Center also makes its facilities available to qualified graduate students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* Course of study leading to the degree of Master of Arts consists of 30 semester hours with thesis and 36 semester hours without thesis. Students may opt to test their proficiency in statistics as a substitute for a language examination. Candidates must take a general examination in three fields. *Admission Requirements:* Bachelor of Arts degree with a major in Geography. Students from other disciplines must be prepared to make up deficiencies.

STAFF:
Joseph Baclawski, Ph.D., Michigan, Professor—Soviet Union
Samuel Baum, B.A., Brooklyn College, Professorial Lecturer—demography
Joseph Fehrenbach, M.A., Georgia, Lecturer—remote sensing, cartography
Allan Fitzsimmons, Ph.D., UCLA, Associate Professor—resources, energy
Marvin Gordon, Ph.D., Columbia, Professor—agriculture, Latin America
John Long, Ph.D., UNC Chapel Hill, Assistant Professorial Lecturer—demography
John Lowe, Ph.D., Clark, Professor—urban, transportation

Edward Marasciulo, B.A., Miami, Professorial Lecturer—Latin America
Shelley Mastran, M.A., George Washington, Assistant Professorial Lecturer—cultural
Eldor Pederson, Ph.D., UC, Berkeley, Associate Professor—urban, political
Charles Perin, Ph.D., Kent State, Assistant Professor—climatology, water resources
Jerome Pickard, Ph.D., Syracuse, Professorial Lecturer—regional development
Philip True, M.S., Chicago, Associate Professor—China

TITLES OF THESES COMPLETED 7/1/79-6/30/80:
Master's:
Lee, Frederick David. "The Korean Community of Metropolitan Washington, D.C.," 1980.

Georgia State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1967 GRADUATE PROGRAM FOUNDED: 1971

DEGREES OFFERED: M.A., M.A.T.

GRANTED 7/1/79-6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 10
NOT IN RESIDENCE: 6

CHAIRMAN: Truman A. Hartshorn

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. John M. Ball, Graduate Director, Department of Geography, Georgia State University, University Plaza, Atlanta, Georgia 30303
Telephone (404) 658-3232

PROGRAMS AND RESEARCH FACILITIES: The Department specializes in two areas of study: Cartography, and Urban Geography, but also offers program training in Population, Cultural Heritage, Energy/Resource Management, and Regional Geography. Students may select any one of these areas of specialty. Further information about the Department and its program is found in the booklet, *Graduate Programs in Geography* at Georgia State University. This booklet can be obtained from the Department without charge.

Georgia State University is a major commuter institution with an enrollment of 20,000 students, graduate and undergraduate, located in downtown Atlanta. It has the largest graduate enrollment among universities in the southeast. The University has excellent public transportation service, including a stop on the new MARTA rapid rail line. The Department maintains close working relations with the University's College of Urban Life, planning agencies and private sector firms in the metropolitan area, and with other geography departments in the State and region.

Many opportunities for part-time employment are available in the metropolitan area. Internship opportunities are available.

The Department is housed on the eleventh floor of the Urban Life Center with excellent facilities including a fully equipped cartography production laboratory, computer terminal, and electronic digitizer. The Department publishes both a map and a research paper series. Listings of titles in print are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University follows the quarter system. Applicants for admission to the graduate school must have completed a Bachelor's program from an accredited institution and present acceptable scores on both the Aptitude and Advanced portions of the Graduate Record Examination. Graduate assistantships are available on a competitive basis. Georgia State University is an Affirmative Action/Equal Employment and Educational Opportunity Institution.

STAFF:

John M. Ball, Ph.D., Michigan State, 1961, Professor of Geography and Professor of Education—geographic education, Latin America

Sanford H. Bederman, Ph.D., Minnesota, 1973, Professor—cultural, Africa, poverty

Borden D. Dent, Ph.D., Clark, 1970, Professor—map design, cartography, urban

Frank Drago, M.A., Georgia State, 1976, Staff Cartographer

Truman A. Hartshorn, Ph.D., Iowa, 1968, Professor and Chairman—urban, transportation, American cities

L. Hugh Hutchinson, M.Ed., Georgia State, 1975, Assistant Professor and Assistant Dean, College of Urban Life—meteorology, climatology

Malcolm A. Murray, Ph.D., Syracuse, 1955, Professor—population, energy, medical

Richard Pillsbury, Ph.D., Pennsylvania State, 1968, Associate Professor—historical-urban, social

University of Georgia

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1951

DEGREES OFFERED: M.A., Ph.D., M.Ed., Ed.D.

GRANTED 7/1/79–6/30/80: 2 Masters, 6 Doctoral

GRADUATE STUDENTS IN RESIDENCE: 31 Masters 11 Ph.D.
NOT IN RESIDENCE: 10 Masters 7 Ph.D.

HEAD: James O. Wheeler

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chair, Graduate Studies Committee, Department of Geography, University of Georgia, Athens, Georgia 30602
Telephone (404) 542-2856

PROGRAMS AND RESEARCH FACILITIES: Work is offered in human, physical, and regional geography and in the various techniques used in geography. A considerable degree of latitude is allowed students in designing their programs of study. A student may concentrate in one aspect of geography or strive for understanding in two or more divisions. All students develop research and organizational skills by completing a thesis or dissertation. The M.Ed. and Ed.D. degrees with a concentration in geography are awarded in conjunction with the College of Education. Students interested in geographic education should correspond directly with the Head, Department of Social Science Education, University of Georgia, Athens, Georgia 30602.

The Department of Geography is housed in a modern, air-conditioned building which provides well equipped teaching and research accommodations including cartographic, climatic, photo interpretation, photogrammetric, and remote sensing equipment and laboratories. The department has a broad range of computer and related facilities such as Teletype and video display, remote terminals, keypunch, digitizer, interactive computer graphics systems, program library, and many kinds of calculating machines. Photographic and darkroom facilities, individual student carrels, research rooms, a rooftop weather station, field vehicles and equipment combine to make the department a stimulating place in which to study. Located in the same building is the Cartographic Services Laboratory which assists faculty and student research efforts.

The University's library holdings, particularly in geography, are extensive. Approximately 255,000 sheet maps and over 140,000 aerial photos are maintained in the nearby Science Library. The Computer Center operates one of the largest and most advanced computer facilities in the U.S., including the IBM 370/158, CYBER and Calcomp 900/1136 Plotter.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Graduates of any accredited institution are eligible to apply for admission to the University's Graduate School. All correspondence concerning admission should be directed to the Department of Geography. Upon receipt of all required admission materials, the department's Graduate Studies Committee will evaluate the application. A $10.00 application fee is required, payable if the committee recommends admission. This fee is non-refundable. Normally graduate students are admitted to initiate their course work in the fall quarter, though exceptions are sometimes made. Whenever possible, prospective students should file completed applications no later than February 15 for admission in the following fall quarter.

Applicants should normally have had a "B" or higher undergraduate grade average and at least 1000 on the Aptitude Test of the Graduate Record Examination or its equivalent on the Miller Analogies Test.

Foreign language requirements are flexible for both the M.A. and Ph.D. programs at Georgia. For the Ph.D., the Department of Geography requires either a reading knowledge of two languages, one of which will be either French, German, or Russian; or, an advanced knowledge (including conversational ability) in one language; or, reading knowledge of one language plus an advanced knowledge of an acceptable alternative research tool (statistics, mathematics, computer programming). For the M.A., reading knowledge of one foreign language or an acceptable alternative research tool is required.

Assistantships are generally awarded for the nine-month academic year, contingent upon satisfactory performance and maintenance of a satisfactory (B or better) academic record. (a) Teaching Assistantships pay $4200–4487 to $5600–5983, plus out-of-state tuition, and require one-third time work (13 hours per week). Up to 26 such appointments are made annually. (b) Graduate School Assistantships pay $4200–4487 for nine-month appointments and $5600–5983 for twelve-month appointments plus out-of-state tuition, and require one-third time work. Recipients are selected from applicants from all University departments on a competitive basis. Recipients are employed in research or as assistants to faculty members. (c) Fellowships: Three Atlantic Steel Company Research Fellowships in Economic Geography each pay $500 tax-exempt, and are awarded to assist in dissertation and thesis research. (d) Support through funded research projects is usually available. The University of Georgia operates on the academic quarter plan with three quarters constituting an academic year. Summer sessions are also held. Normally the department supports deserving graduate students for at least two years in an M.A. program and three years in a Ph.D. program.

STAFF:

Joseph W. Bencloski, Ph.D., Pennsylvania State, 1976, Temporary Assistant Professor—population, cultural, Anglo-America
William H. Berentsen, Ph.D., Ohio State, 1976, Assistant Professor—development, transportation, East Europe and U.S.S.R., quantitative methods
Elgene O. Box, Ph.D., North Carolina, Chapel Hill, 1978, Assistant Professor—biogeography, climatology, soils and environmental studies
*_George A. Brook, Ph.D., McMaster, 1976, Assistant Professor_—geomorphology, Africa
*_Louis De Vorsey, Ph.D., London, 1965, Professor_—historical
*_James S. Fisher, Ph.D., Georgia, 1967, Associate Professor_—North America, economic, methodology
R. James Heyl, Ph.D., Illinois, 1962, Associate Professor—transportation, recreation, industrial
*_Don R. Hoy, Ph.D., Illinois, 1960, Professor_—Latin America, economic
*_John R. Jensen, Ph.D., UCLA, 1976, Assistant Professor_—remote sensing, cartography
*_James B. Kenyon, Ph.D., Chicago, 1960, Associate Professor_—urban, manufacturing, transportation, planning
*_Vernon G. Meentemeyer, Ph.D., Southern Illinois, 1971, Associate Professor_—physical, climatology, microclimatology
Ronald L. Mitchelson, Ph.D., Ohio State, 1979, Assistant Professor—transportation, quantitative methods

***Clifton W. Pannell, Ph.D., Chicago, 1971, Professor*—East Asia, urban and regional systems, political

Albert J. Parker, Ph.D., Wisconsin, 1980, Assistant Professor—biogeography, climatology

Merle C. Prunty, Ph.D., Clark, 1944, Alumni Foundation Distinguished Professor—economic, Anglo-America, land utilization and settlement, U.S. South

Philip W. Suckling, Ph.D., British Columbia, 1977, Assistant Professor—solar radiation climatology, energy balance microclimatology

***Roy A. Welch, Ph.D., Glasgow, 1968, Professor*—remote sensing, photogrammetry, glacial geomorphology

***James O. Wheeler, Ph.D., Indiana, 1966, Professor and Head*—transportation, manufacturing, quantitative

***James F. Woodruff, Ph.D., Michigan, 1952, Professor*—geomorphology, field methods, hydrology

*Members of Graduate Faculty who serve as Ph.D. Advisory Committee Chairmen.

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Hayden, Robert S. "Alterations in the Drainage Density of Small Streams on the Georgia Piedmont Due to Road Construction," 1979.* Mf., Univ. Microfilms.

McCall, Jerome A. "Industrial Linkages, Spatial Separation, and Locational Importance: The Case of the Atlanta Metropolitan Area," 1979.* Mf., Univ. Microfilms.

Belisle, Francois J. "Hotel Food Supply and Local Food Production in Jamaica," 1980.* Mf., Univ. Microfilms.

Hanink, Dean M. "An Empirical Examination of the Relationship between Business Climate and State Industrial Structure and Growth," 1980.* Mf., Univ. Microfilms.

Hsu, Ann Y. "The Intraurban Movement and the Spatial Structure of Cities in a Developing Economy: A Case Study of Taipei," 1980.* Mf., Univ. Microfilms.

Josephs, Victor J. "Perception of Isolation Among White Permanent Residents of Five Rural Communities in Southeast Alaska in 1974," 1980.* Mf., Univ. Microfilms.

M.A.:

Widmeyer, Gregory. "Employment Structure and Economic Performance: Southern SMSAs 1960-1975," 1979.*

Hunt, Roger A. "*Vox pinuum:* A Geographical Analysis of Voter Turnout in Georgia's Presidential Elections, 1940-1972," 1980.*

80

University of Hawaii

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1920 GRADUATE PROGRAM FOUNDED: 1931

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 4 M.A., 6 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 32 M.A. 21 Ph.D.
NOT IN RESIDENCE: 7 M.A. 8 Ph.D.

CHAIRMAN: Roland J. Fuchs

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Admissions Committee, Department of Geography, 2424 Maile Way, University of Hawaii at Manoa, Honolulu, Hawaii 96822
Telephone (808) 948-8465

PROGRAMS AND RESEARCH FACILITIES: In conjunction with other departments and research institutes affiliated with the University of Hawaii, the Geography Department offers programs of graduate study and research leading to the M.A. and Ph.D. degrees. Faculty interests and supporting strengths of the University provide advantages for the study of the following general topics: environmental studies and policies; resource systems; population, urbanization and regional development; cartography, remote sensing and computer applications; Pacific and Asian regional problems.

The Department is housed in a new Social Science building; departmental quarters provide graduate students with desk space and common facilities. Graduate students also have access to modern cartographic and data processing facilities (IBM 7040-1401 system and IBM 360-65 system). Research on topics of departmental specialization is backed by strong collections in several libraries. These include the University libraries, the Bishop Museum Library, the Hawaiian Sugar Planters' Association Library, and the East-West Center collections.

The M.A. program requires a core program of seminars, 15 credits in the field of specialization, a thesis research paper, and an oral examination.

Ph.D. requirements include a seminar on the history of geographic thought, a 30-credit major and 15-credit minor field of specialization, competence in one language plus an approved sequence of advanced courses in research techniques. The candidate must pass written and oral comprehensive examinations and submit a dissertation which is usually based on field work.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. Admission to the M.A. program generally requires a minimum grade point average of B (3.00 on a four-point scale) during the junior and senior years. Admission to the Ph.D. program requires a superior record in graduate work and promise of research ability. Both M.A. and Ph.D. applicants must submit transcripts, GRE results (aptitude tests only), and letters of appraisal from three faculty members. Available financial aids include teaching assistantships with stipends beginning at $5015 with remission of tuition, research assistantships, tuition remission awards, and NDEA (title VI) fellowships. In addition, attention is called to East-West Center Scholarships which are available to Americans studying Asian or Pacific topics, as well as students from Asian or Pacific countries. The grants include travel to and from Hawaii, tuition, books, food, lodging and a personal allowance. If academic requirements have been met, American students may be eligible for a research period in the Asian or Pacific regions. The deadline for application for assistantships is March 1 and for East-West Center Scholarships, December 1.

FACULTY:

R. Warwick Armstrong, Ph.D., Illinois, 1963, Professor—public health and human ecology, medical geography

Jen-hu Chang, Ph.D., Clark, 1954, Professor—climatology, agriculture, China

Sen-dou Chang, Ph.D., Washington, 1961, Professor—China, cartography

Murray Chapman, Ph.D., Washington, 1970, Professor—population (mobility), field methods, Melanesia

Willard T. Chow, Ph.D., UC, Berkeley, 1974, Assistant Professor—urban, social

Donald W. Fryer, Ph.D., London, 1958, Professor—economic development, Southeast Asia

Roland J. Fuchs, Ph.D., Clark, 1959, Professor—urbanization and population distribution policies, regional development, U.S.S.R. and Asia

Gary A. Fuller, Ph.D., Pennsylvania State, 1972, Associate Professor—population (fertility, policy aspects, diffusion), geography of prophylaxis

David H. Kornhauser, Ph.D., Michigan, 1956, Professor—urbanization and impact of technological change, Japan

Brian J. Murton, Ph.D., Minnesota, 1970, Associate Professor—folk-historical geography, peasant agrarian societies, tropical agriculture, South Asia

Peter N. D. Pirie, Ph.D., Australian National, 1964, Professor—population-resource interrelations and management, Pacific

Forrest R. Pitts, Ph.D., Michigan, 1955, Professor—social, cultural, computer applications, Korea and Japan

John M. Street, Ph.D., UC, Berkeley, 1960, Professor—tropical biogeography and agricultural geography, modification of biosphere

Lyndon L. Wester, Ph.D., UCLA, 1975, Assistant Professor—plant geography, Quaternary geography, man-plant relationships

Everett A. Wingert, Ph.D., Washington, 1973, Associate Professor—cartography, remote sensing

PART-TIME FACULTY:

Bryce G. Decker, Ph.D., UC, Berkeley, 1970—biogeography, Pacific

M. Mohiuddin Mia, Ph.D., Pittsburgh, 1978—South Asia

Joseph R. Morgan, Ph.D., Hawaii, 1978—marine geography

Patrick W. Naughton, Ph.D., West Indies, 1977—hazard assessments

ADJUNCT AND AFFILIATE FACULTY:

John E. Bardach, Ph.D., Wisconsin, 1949—marine and aquatic resources

Kent Bridges, Ph.D., UC, Irvine, 1970—computer cartography
Harrison E. Brown, Ph.D., Johns Hopkins, 1941—resource systems
Juanita Liu, Ph.D., Simon Fraser, 1979—tourism, regional development
Abraham Piianaia, B.A., Hawaii, 1953—Hawaii, Pacific
Paul J. Schwind, Ph.D., Chicago, 1970—land use and regional planning
Kirk R. Smith, Ph.D., UC, Berkeley, 1977—energy, environmental health
Andrew N. White, Ph.D., Pennsylvania, 1976—health and public facility location

VISITING FACULTY:
J. O. Ayoade, Ph.D., London, 1971—climatology and hydrology
E. Cotton Mather, Ph.D., Wisconsin, 1951—agricultural and rural geography (Fall)
John C. Sherman, Ph.D., Washington, 1947—cartography (Fall)

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:
Ph.D.:
Ali, Mehtabunisa. "The Demand and Supply of Family Planning Services in India," 1980.
Currey, Bruce. "Mapping Areas Liable to Famine in Bangladesh," 1979.
Hampson, Arthur. "The Growth and Spread of the Baha'i Faith," 1980.
Lyons, Robin R. "Emigration from American Samoa: A Study of Bicultural Assimilation and Migration," 1980.
Merlin, Mark D. "The Cultural Geography of the Opium Poppy: Origin and Spread Through the Bronze Age," 1979.
Wright, Paul A. "Residents Leave Paradise: A Study of Outmigration from Hawaii to the Mainland," 1979.
Master's:
Banu, Hasina. "Temporal and Spatial Variation of Fertility in Bangladesh (1961-1974)," 1979.
Nagata, Kenneth M. "The Photography of Pahole Gulch, Waianae Mountains, Oahu," 1980.
Peterson, Louise E. "Values Involved in Land Use Conflicts: The Case of Waiahole-Waikane," 1979.
Tasaka, Craig T. "An Analysis of Land Use/Cover Classification Derived from Landsat MSS Data for the Region of Pearl Harbor, Oahu," 1980.

University of Idaho

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1970 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.S., M.A.T.

GRANTED 7/1/79-6/30/80: 5

GRADUATE STUDENTS IN RESIDENCE: 16
NOT IN RESIDENCE: 7

ACTING HEAD: John F. Hultquist

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Jan Goetz, Secretary, Graduate Admissions, Department of Geography, University of Idaho, Moscow, Idaho 83843
Telephone (208) 885-6216

PROGRAMS AND RESEARCH FACILITIES: M.S. is a minimum 30-semester-credit program, thesis or non-thesis options, with final examination. M.A.T. is a 30-semester-credit non-thesis program with two options. If B.A. or B.S. degree is in geography, then M.A.T. is taken in Department of Education; if B.A. or B.S. in Education, then M.A.T. taken in Geography. Final examination required. No language requirement for M.S. or M.A.T.

Emphases are regional development, resource, and land management issues including local planning applications. The systematic and analytical perspective is stressed. Cartography, computer applications and "micro" and main computer experience is encouraged.

Administratively the Department is housed within the College of Mines and Earth Resources and the Department's programs are increasingly allied to the College's mission to serve the Northwest and the Nation as a professional source of research and education with respect to resource issues, in particular as regards minerals.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: (Semester System). Admission requires minimum grade point of 2.4 overall, letters of recommendation from three professors and/or job supervisors evaluating applicant's ability to pursue graduate studies. Transcripts of all academic experience and General Graduate Record Examination required. Undergraduate program need not be in geography. Part-time teaching assistantships and other aid available including fellowships for the Landman Program and out-of-state tuition waivers for those willing to commit to a mineral resources/industries program of study.

FACULTY:

Harry H. Caldwell, Ph.D., Clark, 1951, Professor—political, recreation, economic, land use planning, Asia, (on leave 1980-81)

Richard L. Day, Ph.D., Illinois, 1959, Associate Professor—weather and climate, Pacific Northwest, rail passenger transportation

Alan A. DeLucia, Ph.D., Washington, 1974, Associate Professor and Director, Cart-O-Graphics Laboratory—cartography, air photo interpretation and remote sensing

John F. Hultquist, Ph.D., Iowa, 1972, Associate Professor—regional development, geographic methodology, values and behavior in relation to the spatial organization of society, quantitative methods

Nancy B. Hultquist, M.A., Cincinnati, 1967, A.B.D., Iowa, Assistant Professor, half time—computer mapping and graphics, man-environment interaction, quantitative and computer methods

O. Paul Matthews, J.D., Idaho, 1975, Ph.D., Washington, 1980, Assistant Professor—legal aspects of land and resource regulation, mineral law and mining regulation, political

Sam M. W. Scripter, Ph.D., Wisconsin, 1967, Professor and Associate Dean of the College of Mines & Earth Resources—computer applications, local and regional planning, geographical information systems, transportation

One or more temporary people will be hired for 1980–81.

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

M.S.:

Hiller, Donald William. "An Evaluation of Legend Design in the Layer Tint Map," 1980.*

McClain, David Walter. "A Site Evaluation Model for Geothermal Resource Development in Southwest Idaho," 1980.*

Sudderth, Gregory Alan. "Apparent Land Use Impacts of Preferential Assessment in the Moscow, Idaho Vicinity," 1979.*

Illinois State University

DEPARTMENT OF GEOGRAPHY-GEOLOGY

DATE FOUNDED: 1900 GRADUATE PROGRAM FOUNDED: 1945

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/79–6/30/80: 4

GRADUATE STUDENTS IN RESIDENCE: 13
NOT IN RESIDENCE: 1

CHAIRPERSON: Michael D. Sublett

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Michael D. Sublett, Department of Geography-Geology, Illinois State University, Normal, Illinois 61761
Telephone (309) 436-7649

PROGRAMS AND RESEARCH FACILITIES: Program fields available to graduate students which correspond to faculty interest and expertise include: physical geography, cartography, remote sensing, urban-economic geography, rural land use, historical-cultural geography, and resource management. Most faculty also have regional strengths, and many have done intensive foreign area, national, or local field work.

Illinois State University has a superlative map collection housed in the new University Library. The Library's holdings of more than 800,000 volumes are supplemented by the 3,000,000 volume collection of the Center for Research Libraries and by a courier service to the University of Illinois Library. The University Computer Services has programming and statistical consulting services available to students engaged in quantitative research. Computer Services also maintains a 30-inch Calcomp digital plotter. A digitizer and keypunch facility are housed in the Department, and a large library of spatially oriented programs, including GRID, POLYVRT, SYMAP, SYMVU, and CALFORM, are also available. The University and Department both maintain weather observation stations. The Department has a modern photographic darkroom and large stream table for student use.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Illinois State University admits persons to master's degree programs on the basis of academic record and other criteria. All students seeking admission to the master's degree program in geography must submit scores on the Aptitude Test of the Graduate Record Examination.

Graduate assistantships and various loans and scholarships are available to qualified students. Illinois State University operates on a semester system.

GEOGRAPHY STAFF:

George Aspbury, Ph.D., Michigan, 1975, Assistant Professor—computer cartography, quantitative methods, regional economic development

Michael L. Barnhardt, Ph.D., Illinois, 1979, Assistant Professor—geomorphology, soils, Quaternary research

Norman C. Bettis, Ph.D., Michigan State, 1974, Associate Professor (adjunct)—geographic education

Wesley C. Calef, Ph.D., Chicago, 1948, Professor—resource management, physical

Eric S. Johnson, Ph.D., Kansas, 1968, Assistant Professor—conservation, meteorology, economic

James B. Kracht, Ph.D., Washington, 1971, Associate Professor (adjunct)—geographic education

Donald E. Luman, Ph.D., Illinois, 1978, Assistant Professor—cartography, quantitative geomorphology, aerial photo interpretation

Paul F. Mattingly, Ph.D., Pennsylvania State, 1961, Professor—urban, land use, planning

E. Joan Miller, Ph.D., North Carolina, 1965, Professor—cultural landscapes, geography in education, Northwestern Europe, United States

James E. Patterson, Ph.D., Illinois, 1958, Professor—resource management, field geography, physical, Illinois, United States

Else T. A. Schmidt, Ph.D., Munich, 1959, Professor—Common Market land use planning, Europe, Africa, Middle East

Stanley B. Shuman, Ph.D., Illinois, 1957, Professor—physical, Australia and Pacific

Michael D. Sublett, Ph.D., Chicago, 1974, Associate Professor and Chairperson—rural, applied, Illinois

John E. Trotter, Ph.D., Chicago, 1962, Professor—recreational resources, climatology, Asia

William D. Walters, Jr., Ph.D., Indiana, 1974, Associate Professor—historical, historic preservation

GEOLOGY STAFF:

Richard Hart, Ph.D., Iowa, 1961, Associate Professor—micropaleontology, oceanography

James Kirchner, Ph.D., Iowa, 1969, Associate Professor—mineralogy, igneous petrology, field geology

Edwin Morse, M.S., Wayne State, 1970, Instructor—groundwater, engineering geology

Robert Nelson, Ph.D., Iowa, 1970, Associate Professor—structural geology, Quaternary research, geomorphology

Thomas Searight, Ph.D., Illinois, 1959, Professor—sedimentation, stratigraphy, field geology, fuels

University of Illinois

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1950

DEGREES OFFERED: M.A., M.S., Ph.D.

GRANTED 7/1/79–6/30/80: 3 Masters, 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 13 Masters 24 Ph.D.
NOT IN RESIDENCE: 0 Masters 3 Ph.D.

HEAD: Arthur Getis

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor Arthur Getis, Head, Department of Geography, University of Illinois, Urbana, Illinois 61801
Telephone (217) 333-1880

PROGRAMS AND RESEARCH FACILITIES: Programs of graduate study at the University of Illinois may be classified into five broad fields with specialization in a variety of interest areas. *Economic Geography* and *Regional Science* including: Urban and Regional Analysis, Industrial Location, Regional Economic Development, Resources Utilization, Transportation, and Public Policy Evaluation. *Historical Geography:* Analysis of historic landscapes, including: Historic Preservation, Morphology of U.S. Cities, Cultural Landscape Evolution, and the Perception of Past Landscapes. *Physical Geography:* Measurement and analysis of the physical environment in the areas of Geomorphology, Climate, Soils and Biogeography. *Social Geography:* Geographic aspects of social processes and patterns, including: Cognition, Communications/Diffusion, Migration, Voting Behavior, Ethnic and Racial Minorities, Urban Residential Patterns, and Urban Pathologies. *Technical Master's* including: Remote Sensing, Quantitative Techniques and Computer Cartography.

Departmental facilities include the Spatial Data Analysis Laboratory as well as cartographic and soils laboratories, a diffractometer and spectrometer, and computer terminals. Other research facilities include a library which is the largest publicly supported university library in the United States, a Map and Geography Library containing an excellent collection of monographs and journals and one of the largest map collections in the country, the Social Science Quantitative Laboratory, and large multiple component computing and graphics systems.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. Minimum standard for admission to the Masters program is a B average, higher for the Ph.D. program. Teaching assistantships, research assistantships and fellowships are available. Currently, one-half time appointments for assistants carry a stipend of about $4400 plus remission of tuition and fees. Nearly all resident graduate students are supported by fellowships, scholarships and assistantships.

FACULTY:

Charles S. Alexander, Ph.D., UC, Berkeley, 1955, Professor—geomorphology (particularly coastal), ecology, field methods, Quaternary and Caribbean studies

James A. Bier, M.S., Illinois, 1955, Instructor—thematic cartography, map production

Marilyn A. Brown, Ph.D., Ohio State, 1977, Assistant Professor—environmental cognition, innovation diffusion, contemporary urban ecology

James E. Burt, Ph.D., UCLA, 1980, Assistant Professor—climatology, hydrology, quantitative analysis

Jerome D. Fellmann, Ph.D., Chicago, 1950, Professor—urban, historical, bibliographic techniques, U.S.S.R.

Thomas D. Frank, Ph.D. Utah, 1979, Assistant Professor—remote sensing, computer cartography

Arthur Getis, Ph.D., Washington, 1961, Professor and Head —settlement theory, spatial patterns, urban analysis

Geoffrey J.D. Hewings, Ph.D., Washington, 1969, Associate Proessor—transportation, regional development, methods of urban and regional analysis

James O. Huff, Ph.D., Northwestern, 1973, Assistant Professor—urban geography, population redistribution, central place theory, mathematical structures

John A. Jakle, Ph.D., Indiana, 1967, Associate Professor—historical and social geography

Donald L. Johnson, Ph.D., Kansas, 1972, Associate Professor—geomorphology, zoogeography, soils, paleoecology, Quaternary studies

John V. O'Loughlin, Ph.D., Pennsylvania State, 1973, Associate Professor—urban, political, social, Europe

Howard G. Roepke, Ph.D., Northwestern, 1953, Professor—industrial location manufacturing, economic development, resource management

Curtis C. Roseman, Ph.D., Iowa, 1969, Associate Professor—social, migration, quantitative

John Thompson, Ph.D., Stanford, 1958, Professor—cultural, historical, Latin America

Colin E. Thorn, Ph.D., Colorado, 1974, Assistant Professor—periglacial geomorphology, Quaternary studies, geomorphic paradigms

AFFILIATED FACULTY:

David E. Boyce, Ph.D. (Regional Science), Pennsylvania, 1966, Professor—transportation models and methods, urban location and transportation

Stanley Changnon, M.S., Illinois, 1956, Professor and Chief, Illinois Water Survey—meteorology, climatology

David A. Cobb, M.S. (Library Science), Indiana, 1973, Associate Professor—Map and Geography Librarian

Bruce M. Hannon, Ph.D., Illinois, 1970, Associate Professor—energy use and conservation, environmental planning

Andrew M. Isserman, Ph.D. (Urban Planning), Pennsylvania, 1972, Associate Professor—regional economic and demographic analysis

William P. Lowry, Ph.D., Oregon State, 1962, Professor—meteorology, climatology, environmental planning

Demitri B. Shimkin, Ph.D., Berkeley, 1939, Professor—public health, human ecology, North America, Siberia

Frank Southworth, Ph.D., Leeds, 1977, Assistant Professor—transportation modeling

Wayne M. Wendland, Ph.D., Wisconsin, 1972, Associate Professor—climatology, meteorology, paleoclimatology

TITLES OF DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Molyneaux, Gary A.O. "Programmed Land Use Change in an Urban Setting: The J. C. Nichols Company and the Country Club District of Kansas City," 1979. Mf., Univ. Microfilms.

Walasek, Richard W. "Spatial Variations in Electricity Demand Elasticities: The Residential, Commercial and Industrial Demand for Electricity in Substate Regions," 1980. Mf., Univ. Microfilms.

University of Illinois at Chicago Circle

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1964 GRADUATE PROGRAM FOUNDED: 1972

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 2

GRADUATE STUDENTS IN RESIDENCE: 18
NOT IN RESIDENCE: 7

HEAD: Siim Sööt

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Douglas B. Carter, Director of Graduate Studies, Department of Geography, P.O. Box 4348, University of Illinois at Chicago Circle, Chicago, Illinois 60680
Telephone (312) 996–3112

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers an M.A. in Environmental Studies and Urban Geography. The program reflects the premise that geography is a spatial science which is concerned with people's relationship with the social, economic and physical environment. Although the graduate curriculum is tailored to the special needs of each student many choose from established curricula such as environmental behavior, environmental management, industrial and commercial development, transportation, and environmental impact of urbanization. Furthermore, student curricula can take advantage of the Geography faculty's affiliations with the Energy Resources Center, Urban System Laboratory, School of Urban Sciences and the School of Public Health (at the Medical Center). Many students also avail themselves of the employment opportunities and training capabilities of the department's Chicago Area Geographical Information Study (CAGIS Laboratory), a division of the department specializing in the development and management of information systems and data banks.

The Department of Geography is located in the Behavioral Science Building, which also houses a remote computer terminal room with a highspeed printer, numerous interactive terminals, and a full time consultant. Additionally the department has two computer terminals, an Auto-Trol 3900 (4' x 6') Digitizer, a keypunch, a fully equipped dark room, a complete line of cartographic equipment and several specialized teaching laboratories.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The department, operating on the quarter academic system—with 8 week summer quarters—offers a large number of teaching and research assistantships. These assistantships carry tuition and fee waivers, although some tuition-only waivers are also available. Opportunities for part-time professional employment also exist in the Chicago area. The department welcomes students who wish to pursue work toward a master's degree in Geography while maintaining their employment.

Students may be admitted to UICC at the beginning of each quarter. Students desiring financial aid are encouraged to submit their completed applications before March 1, when most assistantships and tuition and fee waivers for the following academic year are awarded. Late applications may also be eligible for financial aid including aid from other academic units on campus. Requests for further information and applications for admission and financial aid should be addressed to the Director of Graduate Studies.

STAFF:

Lyndon R. Babcock, Ph.D., University of Washington, Director, Environmental Health, University of Illinois Medical Center—environmental quality, pollution studies and policy

James B. Blaut, Ph.D., Louisiana State—cultural, behavioral, geographic learning, history and philosophy, peasant agriculture, Latin America

Raymond M. Brod, M.A., Northeastern Illinois, Cartographer, UICC Cartographic Laboratory

Douglas B. Carter, Ph.D., Washington, Director of Graduate Studies—climatology, surface environmental conditions, biogeography, North America

Alden S. Cutshall, Ph.D., Ohio State (Emeritus)—regional development, Asia

Edwin H. Draine, Ph.D., Chicago—environment and resource management and policy, economic, Soviet Union

Gary L. Fowler, Ph.D., Syracuse, Associate Director, Energy Resources Center—behavioral, regional development and migration, energy studies and policy, North Africa and the Middle East

Bruce G. Gladfelter, Ph.D., Chicago—geomorphology, geoarcheology, paleogeography and environmental studies (joint appointment with Anthropology)

James E. Landing, Ph.D., Pennsylvania State—cultural, religious, historical, teaching of geography, North America (joint appointment with Religious Studies)

Albert J. Larson, Ph.D., Nebraska—historical, cultural, rural environments and settlement, cartography, North America, Europe

David A. Merrill, M.A., Illinois at Chicago Circle, Director of Research, Chicago Area Geographic Information Study

Ross M. Mullner, Ph.D., Illinois at Chicago Circle—health care systems (joint appointment with Epidemiology, Medical Center)

David M. Solzman, Ph.D., Chicago—urban, urban environments, economic, philosophy of the landscape

Siim Sööt, Ph.D., Washington, Department Head—transportation, economic, quantitative methods, computer cartography, Soviet Union, Europe

Edwin H. Thomas, Ph.D., Northwestern—geographic information systems, urban (joint appointment with Health Resources Management, Medical Center)

Clifford E. Tiedemann, Ph.D., Michigan State—economic, settlement and land use, pattern analysis, cartography (joint appointment with Environmental Health, Medical Center)

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Puhala, Robert Alan. "Conceptual Geography in an Historical Perspective: A Sequent Occupance Case Study of Horicon Marsh," 1979.

Saper, Jan. "Impacts of Surface Mined Coal Production on Prime Agricultural Lands in Illinois," 1979.

Indiana State University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1893 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A. in Geography, M.A. in Geology, M.A. in Earth Science, Ph.D. in Geography. Minors are available in appropriate number of fields.

GRANTED 7/1/79-6/30/80: 3 Masters, 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 14 Masters 12 Ph.D.
NOT IN RESIDENCE: 17 Masters 9 Ph.D.

CHAIRMAN: Benjamin Moulton

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Benjamin Moulton, Chairman, Department of Geography and Geology, Indiana State University, Terre Haute, Indiana 47809
Telephone (812) 232-6311

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography and Geology is housed in contemporary quarters with space and excellent facilities for research and laboratories. A staff cartographer is available. There are at present a map library, remote sensing laboratory, cartography laboratories, darkrooms, quantitative laboratory, graduate office space and preparation rooms. The department owns a bank of electronic calculators. For field work and research, three vans are available. An experiment station 16 miles away is suitable for soils study, mapping and field laboratory.

The University Library has a science library in the same building that houses the Department of Geography and Geology. The University acts as a depository for the Superintendent of Public Documents. The map library contains 160,000 maps and a growing aerial photo collection. Two computers and a horizontal plotter are available for research through the Computer Center.

The remote sensing laboratory has state-of-art capabilities for machine-assisted processing of spectral data via a remote computer terminal to the Laboratory for Applications of Remote Sensing (LARS)/Purdue University. In addition this laboratory has a GOES weather satellite receiving station, Kelsh plotter, Numonics digitizer, zoom transfer scope, diaze image processing equipment, digital image display, and standard aerial photointerpretation equipment.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on the semester system and has an active summer program of 10 weeks. Students requesting admission must complete application papers. All students must take the Graduate Record Examination. Transcripts and letters of reference must be submitted. Assistantships and Fellowships are available. The amount would depend upon qualifications. Holders of financial assistantships are exempted from tuition charges.

STAFF:

Donald W. Ash, Ph.D., SUNY Binghamton, 1979, Assistant Professor—hydrology, geomorphology

Byron K. Barton, Ph.D., Nebraska, 1949, Professor—regional research geography

Robert W. Bastian, Ph.D., Indiana, 1968, Professor—historical

William D. Brooks, Ed.D., Indiana, 1969, Associate Professor—physical, cartography

Adelord J. Cantin, M.A., Iowa, 1957, Assistant Professor—physical

John H Cleveland, Ph.D., Indiana, 1962, Professor—economic geology, petrology

Robert R. Drummond, Ph.D., Northwestern, 1953, Professor—urban, geomorphology

James L. Guernsey, Ph.D., Northwestern, 1957, Professor—land use, resource management

John C. Hook, Ph.D., Iowa, 1956, Professor—physical, astronomy, quantitative

Robert Howe, Ph.D., Wisconsin, 1968, Professor—paleontology, remote sensing

Robert Larson, Ph.D., Indiana, 1975, Assistant Professor—urban

Lois Latta, Ph.D., Illinois, 1959, Associate Professor—Anglo-America, Latin America

Paul Mausel, Ph.D., North Carolina, 1966, Professor—soils, remote sensing

John R. McGregor, Ph.D., Illinois, 1965, Professor—economic, industrial

Victor C. Miller, Ph.D., Columbia, 1953, Professor—geomorphology, photo interpretation

Benjamin Moulton, Ph.D., Indiana, 1950, Professor and Chairman—field geography, Anglo-America

John E. Oliver, Ph.D., Columbia, 1969, Professor—climatology, physical

Donald E. Owen, Ph.D., Wisconsin, 1963, Professor—paleontology, stratigraphy

Akhtar Siddiqi, Ph.D., London, 1964, Professor—Asia, economic

Samuel W. Smith, Ph.D., Iowa, 1962, Associate Professor—climatology, Africa (Emeritus)

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Stadler, Stephen J. "Socioeconomic Residential Patterns and Industrial Air Pollution: A Case Study," 1979.

Master's:

Adidas, Eric O. "A Study of the Geophysical Characteristics of the Pennsylvanian Shales in the Staunton and Lunton Formation in Clay County, Indiana, Using Gammaray Logs and X-ray Diffractograms," 1980.

Fitzpatrick, Michael F. "Origin of the Present Course of the Potomac River near Paw Paw, West Virginia," 1980.

Posner, Alex. "The Effect of Progressive Urbanization on the Chemical Variability and Hydrologic Regime of Several Streams on Long Island, N.Y.," 1980.

Shahabi, Mohammad Ali. "Analysis of the Distribution of Petroleum Deposits In Vigo County, Indiana Through Computer Processing of Landsat Multispectral Scanner Data," 1979.

Witherspoon, Mark. "Groundwater Resource Analysis of the Arkansas Ouachita Mountains," 1979.

Indiana University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.A., M.A.T., Ph.D.

GRANTED 7/1/79–6/30/80: 8 M.A., 1 M.A.T., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 16 M.A. 1 M.A.T. 14 Ph.D.
NOT IN RESIDENCE: 7 Ph.D.

CHAIRMAN: Robert N. Taaffe

FOR CATALOG AND FURTHER INFORMATION WRITE TO: John Odland, Director of Graduate Admissions, Department of Geography, Indiana University, Bloomington, Indiana 47405
Telephone (812) 337-6303

PROGRAMS AND RESEARCH FACILITIES: The M.A. and Ph.D. programs of the Geography Department are research-oriented degree programs in the science of geography. Courses in advanced quantitative methods in geography, research design, geographic theory, and models in geography constitute the core of study for both degrees.

Requirements for the M.A. degree: (1) completion of the core courses noted above; (2) completion of a Master's thesis or two research papers and 30 hours credit; (3) completion of a comprehensive examination covering the core courses and the student's research.

The Ph.D. degree involves (1) competence in research skills; (2) completion of an oral and written exam covering the student's major area of specialization within the department and his minor in a related department; and (3) completion of a Ph.D. dissertation.

The M.A.T. degree provides the skills and basic geographical knowledge necessary for teaching geography in secondary schools or junior colleges. Requirements for the M.A.T. degree are 36 credits, of which 30 must be graduate credit; no thesis is required.

Starting in 1979-80, the Geography Department and the School of Public and Environmental Affairs will offer a combined M.A.-M.S.E.S. program in environmental science and a new Ph.D. degree in Regional Analysis and Planning for students who are interested in careers in planning.

Research facilities include the Geography and Map Branch Library; cartographic, photogrammetric, and photographic equipment; and the Research Computing Center, which houses a CDC 6600 Computer system. The department contains a quantitative research laboratory with a terminal to the Computing Center, a Wang 2200B system, a CRT Plotter and Typewriter, and a Stacor digitizer.

The Department works very closely with several other divisions of the University including the School of Public and Environmental Affairs, the Water Resources Research Center, the Russian and East European Institute, and the Department of East Asian Languages and Cultures.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University is on the semester system. Admission to the M.A. program requires an undergraduate major in geography or its equivalent. The Ph.D. program requires an M.A. in geography from Indiana or its equivalent. Academic year financial awards include NDEA, Title IV; National Science Foundation Fellowships; University Fellowships; graduate teaching assistantships ($3500 and over for 10 months). The Department also awards a fairly large number of Departmental Fee Remission Awards which will pay all fees up to 12 hours credit, except for allocated fees which are currently $78 per semester. For an out-of-state student, the combined assistantship and fee-remission represents an award of over $5700. Assistants may carry up to

12 hours of graduate credit per semester and are expected to work 20 hours per week for the Department. Also available are Graduate Fee Remission Scholarships, Dissertation Year Fellowships ($2000 to $3600), and Doctoral Student Grant-in-Aid awards. Applications for the 1981-82 academic year should be received by March 1, 1981. Notification of awards will be made by April 1. Many graduate students also serve as research assistants on externally funded research projects.

STAFF:

Thomas F. Barton, Ph.D., Nebraska, 1935, Professor Emeritus—urban, conservation, Southeast Asia

Don C. Bennett, Ph.D., Syracuse, 1957, Associate Professor—cultural, urban, Southeast Asia

William R. Black, Ph.D., Iowa, 1969, Professor—economic, transportation, quantitative methods

Dennis Conway, Ph.D., Texas, 1976, Assistant Professor—migration, urban

A. Stewart Fotheringham, Ph.D., McMaster, 1980, Assistant Professor—spatial interaction models, transportation, quantitative

Rickie Gilliard, Ph.D., Ohio State, 1980, Assistant Professor—urban, migration, Africa

Charles E. Greer, Ph.D., Washington, 1975, Assistant Professor—China, resource management

Kingsley E. Haynes, Ph.D., Johns Hopkins, 1971, Professor and Director, Center for Urban and Regional Analysis—economic, location theory, geographical methodology

John M. Hollingsworth, M.S., Indiana, 1970, Lecturer and Departmental Cartographer

Robert C. Kingsbury, A.M., Kansas, 1951, Associate Professor—cartography, aerial photography, South Asia

David B. MacKay, Ph.D., Northwestern, 1971, Associate Professor of Marketing and Geography—spatial consumer behavior, cognitive mapping

Theodore K. Miller, Ph.D., Northwestern, 1971, Associate Professor and Associate Director, Center for Urban and Regional Analysis—urban, fluvial, quantitative

John Odland, Ph.D., Ohio State, 1972, Professor—urban, quantitative methods, mathematical models

Greg A. Olyphant, Ph.D., Iowa, 1979, Assistant Professor—geomorphology, mathematical models, Arctic

Lawrence Onesti, Ph.D., Wisconsin, 1973, Associate Professor—fluvial geomorphology, Arctic

Daniel Seldin, M.L.S., Maryland, 1973, Geography and Map Librarian

Robert N. Taaffe, Ph.D., Chicago, 1959, Professor—economic, transportation, urban, U.S.S.R. and Eastern Europe

Ernest H. Wohlenberg, Ph.D., Washington, 1970, Associate Professor—economic, natural resources, economic development

ASSOCIATED PROFESSORS IN OTHER DEPARTMENTS:

David F. Parkhurst, Ph.D., Wisconsin, 1970, Assistant Professor, Public and Environmental Affairs—plant geography

James C. Randolph, Ph.D., Carleton, 1972, Assistant Professor, Public and Environmental Affiars—zoology-ecology

George M. Smerk, D.B.A., Indiana, 1963, Professor of Transportation—urban transportation

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Ziehr, Charles T. "Intraurban Decentralization of Manufacturing: The Theoretical Implications of External Economies," 1980.* Mf., Univ. Microfilms.

Master's:

Graham, Mary M. "Residential Relocation and Search Patterns Resulting from Stress Situations," 1979.* Mf., Univ. Microfilms.

Jacks, Judy A. "Neighborhood Organizations Locational Conflict," 1979.* Mf., Univ. Microfilms.

Indiana University of Pennsylvania—IUP

DEPARTMENT OF GEOGRAPHY AND REGIONAL PLANNING

DATE FOUNDED: 1930's GRADUATE PROGRAM FOUNDED: 1960

DEGREES OFFERED: M.A., M.S., M.Ed.

GRANTED 7/1/79-6/30/80: 3 M.A., 4 M.S.

GRADUATE STUDENTS IN RESIDENCE: 8

CHAIRPERSON: Ruth I. Shirey

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairperson, Department of Geography and Regional Planning, Indiana University of Pennsylvania, Indiana, Pennsylvania 15705
Telephone (412) 357-2250

PROGRAMS AND RESEARCH FACILITIES: The M.A. and M.S. programs at IUP provide a common core of course work in geographic philosophy, research, and techniques. The M.S. student must elect a concentration in regional development, regional planning, or cartography while the M.A. student is free to custom design his or her program. Thesis and non-thesis options are available.

The department occupies the ground floor of Leonard Hall. Facilities include the cartography and computing labs, two terminals to the university's computer, a reading room and map library and graduate student offices.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Applicants must have Bachelor's degree with 2.6 QPA, satisfactory score on GRE, and satisfactory recommendations.

Graduate assistantships available. Full-time students interested in appointments for the academic year should request applications from the Dean of the Graduate School prior to February 1. Appointments are made by the Department, with the approval of the Graduate School.

STAFF:

Donald J. Ballas, Ph.D., Nebraska, Professor—cultural, historical, Africa
Noland R. Heiden, Ph.D., Michigan, A.I.C.P., Associate Professor—planning
Gopal S. Kulkarni, Ph.D., Pittsburgh, Professor—urban, economic, Asia
Vincent P. Miller, Ph.D., Michigan State, Professor—political, Europe, regional development
James E. Payne, M.A., North Carolina, Professor—cartography, map and photo interpretation, remote sensing
Ruth Shirey, Ph.D., Tennessee, Professor—Latin America, energy, industrial
Leonard P. Tepper, Ph.D., Pittsburgh, Professor—research methods, population, economic
Charles E. Weber, Ed.D., Columbia, Professor— conservation, Asia, land use
Maurice M. Zacur, Ed.D., Pennsylvania State, Professor—geographic education, Pennsylvania

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:
Master's:

DeQuinze, Robert. "A Comparison of Theoretical and Empirical Methods of Delimiting Retail Trade Areas of Small and Medium Size Towns in Pennsylvania," 1980.
Romano, Joseph. "Spatial Analysis of Residential Segregation in Pittsburgh, Pennsylvania," 1980.

The University of Iowa

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 9 M.A., 9 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 12 M.A. 21 Ph.D.
NOT IN RESIDENCE: 0 M.A. 11 Ph.D.

CHAIRMAN: James B. Lindberg

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Department of Geography, The University of Iowa, Iowa City, Iowa 52242
Telephone (319) 353-3131

PROGRAMS AND RESEARCH FACILITIES: The Iowa Ph.D. program has long held a reputation for excellence in quantitative geographical analysis. Research encompasses both current policy issues and longer-range theoretical concerns. Areas of specialization include:

- environmental policy, energy, and water resources
- locational analysis of political, economic, and social processes
- medical geography
- regional growth and international development
- transportation planning and policy analysis.

An applied Master's Program has been designed to provide special training for students interested in non-academic careers. Graduates of the program are prepared for positions with private firms or governmental agencies involved in market analysis, urban and transportation analysis, land development, environmental impact studies, resource evaluation, health services planning, and related areas.

The faculty strives to maintain an atmosphere in which each student can attain not only the intellectual rigor growing out of close student-faculty research interests, but also the excitement of truly independent creativity.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: In determining the admission of a student to its graduate program, the department considers the total record of each student individually, including: (1) undergraduate grade point average (admitted on condition if GPA is below 2.75); (2) scores on the Graduate Record Examination Aptitude Test (applicants for assistantships must submit GRE scores of 1100 on verbal and quantitative examinations combined); (3) at least three letters of recommendation; (4) an essay in which the applicant sets forth the reasons for wanting to continue the study of geography at the University of Iowa.

Regular departmental Teaching and Research Assistantships carry stipends upwards from $5300 for the two semester academic year. Also available are a limited number of Teaching and Research Fellowships which provide stipends of at least $6400 for year-round support, plus full tuition scholarships for up to four years. Funded projects also provide for research assistants. Of 32 full-time students in 1979–1980, 91 percent received funding from University or government sources.

The 1980–81 tuition rate for in-state graduate students is $950 for the academic year. Out-of-state students pay $2000. All teaching and research assistants are charged at in-state rates. Deadline for applicants who wish to be considered in the initial round of financial aid awards is February 15.

STAFF:

John W. Fuller, Ph.D., Washington State, 1968, Professor (joint with Urban and Regional Planning, and Economics) and Director of the Institute of Urban and Regional Research—transportation and policy analysis

Rex Honey, Ph.D., Minnesota, 1972, Associate Professor—social and political processes, spatial problems in jurisdictional change

Konstantinos Koutsopoulos, Ph.D., Colorado, 1975, Assistant Professor—urban and transportation analysis, land use and planning

Russell Lee, Ph.D., McMaster, 1978, Assistant Professor—urban and regional modeling, medical, regional policy

James B. Lindberg, Ph.D., Wisconsin, 1963, Professor and Chairman—industrial location, energy resources and use

Michael L. McNulty, Ph.D., Northwestern, 1966, Professor—geographic perspectives on development, urban, Africa

R. Rajagopal, Ph.D., Michigan, 1973, Associate Professor—resource and environmental management, information systems

David R. Reynolds, Ph.D., Northwestern, 1966, Professor—location theory and collective decision-making, behavioral analysis, political

Gerard Rushton, Ph.D., Iowa, 1964, Professor—location theory, medical, spatial planning in developing countries, behavioral

Graham A. Tobin, Ph.D., Strathclyde, 1978, Assistant Professor—water resources, hydrology, flood hazard and environmental management

ADJUNCT FACULTY:

Jordan J. Louviere, Ph.D., Iowa, 1973, Associate Professor, Department of Marketing—behavioral, consumer spatial behavior, transportation, human decision making and choice

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Churchill, Robert Russell. "Topoclimate as a Controlling Factor in Badlands Hillslope Development," 1979.* Mf., Univ. Microfilms.

Ericksen, Robert Howard. "Residential Preference and Trade-Off Modeling: A Disaggregate Approach," 1980.* Mf., Univ. Microfilms.

Frankland, Phillip Lee. "Farmers' Response to Drought Occurrences: A Man-Computer Simulation Approach," 1980.* Mf., Univ. Microfilms.

Ghosh, Avijit. "A Model of Itinerant Trading and Periodic Marketing," 1979.* Mf., Univ. Microfilms.

McLafferty, Sara Louise. "Distributional Considerations in the Location of Public Services," 1979.* Mf., Univ. Microfilms.

Meyer, Robert John. "A Behavioral Model of Choice Set Formation in Destination Choice," 1979.* Mf., Univ. Microfilms.

Olyphant, Greg Allan. "Models of Cirque Development and Postglacial Modification," 1979.* Mf., Univ. Microfilms.

Osei-Kwame, Peter. "Spatial Dimensions of Political Integration in Kumasi, Ghana," 1979.* Mf., Univ. Microfilms.

Parson, Charles Grady. "Rock Glaciers and Site Characteristics on the Bianca Massif in South-Central Colorado," 1980.* Mf., Univ. Microfilms.

Master's:

Morris, Scott Edward. "Holocene Periglacial Facies: A Model of Location, Relative Development and Environmental History, Blanca Massif, Colorado," 1979.* Mf., Univ. Microfilms.

The Johns Hopkins University

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL ENGINEERING

DATE FOUNDED: 1948 GRADUATE PROGRAM FOUNDED: 1948

DEGREES OFFERED: M.A., M.S.E., Ph.D.

GRANTED 7/1/79–6/30/80: 1 Masters, 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 3 Masters 43 Ph.D.
NOT IN RESIDENCE: 3 Masters 16 Ph.D.

CHAIRMAN: M. Gordon Wolman

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. M. Gordon Wolman, Chairman, Department of Geography and Environmental Engineering, The Johns Hopkins University, Baltimore, Maryland 21218
Telephone (301) 338-7090

PROGRAMS AND RESEARCH FACILITIES: Program objectives include the study of (1) the natural processes of land, air, and water including underlying physical, chemical and biological principles, (2) the relationship between man as an individual and as a member of social groups to his natural and social environment; and (3) systems analysis and economics for public decision making. Specific graduate programs are tailormade and designed to permit each student to focus upon topics of interest and to develop competence in fundamental skills essential to research in his chosen field and problem area. In pursuit of these objectives students are expected to pursue work beyond the confines of the Department. Areas of special strength are: a) surficial earth processes of geomorphology, plant geography, soils, and hydrology; b) environmental biology including aquatic biology, ecology and population dynamics; c) human spatial location, with emphasis on behavioral models, perception of the natural and social environment, models of urban population dynamics, and regional science; d) engineering science and technology with emphasis on sanitary engineering systems analysis, and physical and chemical processes in the environment.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. *Admission requirements:* interests in the field coincident with those of the Department, and evidence of competence to pursue graduate work at the M.A. or Ph.D. level; *Financial Aid:* fellowships, stipends, research support including Federal programs available.

STAFF:
Dr. John Boland, Associate Professor—environmental engineering
Dr. Lucien Brush, Professor—sediment transport
Dr. John Cady, Lecturer—soil science
Dr. Charles Chamberlin, Assistant Professor—sanitary engineering

Dr. Jared Cohon, Associate Professor—environmental systems
Dr. Jack Fisher, Professor—urban studies
Dr. Jerome Gavis, Associate Professor—chemical engineering
Dr. Steve Hanke, Professor—resource economics
Dr. David Harvey, Professor—behavioral geography
Dr. Cornelius W. Kruse, Professor—public health engineering
Dr. Charles ReVelle, Professor—systems analysis
Dr. Richard Weissbrod, Assistant Professor—transportation geography
Dr. M. Gordon Wolman, Professor—geomorphologic processes

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Kohlenstein, Lawrence. "Aspects of the Population Dynamics of Striped Bass (*Morone Saxatilis*) Spawning in Maryland Tributaries of the Chesapeake Bay," 1980. Mf., Univ. Microfilms.

Neuzil, Christopher. "Fracture Leakage in the Cretaceous Pierre Shale and Its Significance for Underground Waste Disposal," 1980. Mf., Univ. Microfilms.

Waite, Norman B. "Minimizing the Cost of Operating Aircraft on Multi-stop Tours," 1980. Mf., Univ. Microfilms.

Master's:

Huppman, L. Reed. "Patterns of Distribution of Some Forest Herbaceous Plants in the Maryland Piedmont," 1980.

Kansas State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1961

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 5

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 3

HEAD: Stephen E. White

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor David E. Kromm, Department of Geography, Kansas State University, Manhattan, Kansas 66506
Telephone (913) 532-6727

PROGRAMS AND RESEARCH FACILITIES: Advanced work consisting of classes and seminars is offered as part of the Master of Arts curriculum. Close supervision of the thesis research, and frequent visits by geographers from other univer-

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sities, help to provide a thorough and well-balanced program. The moderate size of the Geography Department makes possible an informal atmosphere and a close rapport between faculty and graduate students.

A cartographic laboratory, photographic reproduction equipment, a collection of topographical maps for research purposes, and a reference library are all contained within the Department. The University library, with its large collection of geographical journals and the complete American Geographical Society research catalog, is nearby.

Other parts of the University offer opportunities for enrichment of the graduate student's program. Advanced study is possible in such areas as economic regional analysis, regional and community planning, natural resources management, transportation engineering, agriculture, and the South Asia Center.

The attractive university campus, rolling and tree-shaded, is located in Manhattan, a town with a population of 30,000. Just to the north of the town is the 25-square-mile Tuttle Creek reservoir and an attractive area of the Flint Hills that was considered by the Interior Department for a new national park.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on a semester system. Admission to the Graduate School ordinarily requires a "B" average in the junior and senior years plus three letters of recommendation. In some cases applicants with less than a "B" average may be admitted on a provisional basis. Six graduate teaching assistantships are available.

STAFF:

Charles Bussing, Ph.D., Nebraska, 1968, Assistant Professor—cultural, agricultural, Latin America

David E. Kromm, Ph.D., Michigan State, 1967, Professor—resource management, environmental behavior, Eastern Europe, environmental education

M. Duane Nellis, Ph.D., Oregon State, 1980, Assistant Professor—land use, remote sensing applications

Huber Self, M.S., Oklahoma State, 1947, Associate Professor—physical, cartography, Kansas

H. L. Seyler, Ph.D., Indiana, 1971, Associate Professor—economic-urban, regional development, quantitative methods

William R. Siddall, Ph.D., Washington, 1959, Professor—transportation, environmental quality, Anglo-America

Stephen L. Stover, Ph.D., Wisconsin, 1960, Associate Professor—agricultural, historical, Oceania

Stephen E. White, Ph.D., Kentucky, 1974, Associate Professor—population and migration, environmental perception, transportation

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Fleetwood, David. "A Locational Analysis of Non-Metropolitan Secondary Hospitals in Kansas," 1980.*

Shanklin, Gerald. "Perception of Flood Hazard in Manhattan, Kansas," 1980.*

University of Kansas

DEPARTMENT OF GEOGRAPHY-METEOROLOGY

DATE FOUNDED: 19[illegible]   GRADUATE PROGRAM FOUNDED: 1958

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 6 M.A., 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 38 M.A. 19 Ph.D.
NOT IN RESIDENCE: 4 M.A. 8 Ph.D.

CHAIRMAN: Glen A. Marotz

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Student Affairs Committee, Department of Geography-Meteorology, University of Kansas,
Lawrence, Kansas 66045
Telephone (913) 864–4276

PROGRAMS AND RESEARCH FACILITIES: Departmental options for graduate programs emphasize systematic fields and selected regional coverage. Physical geography is well represented, particularly in soils, geomorphology (supplemented by work in geology), plant geography, and climatology (especially water resources, agro- and microclimatology). Well-equipped soils, vegetation, and climatological laboratories are available for research. Photo-analysis and remote sensing facilities are housed within the Department and at the Center for Research in Engineering Sciences. Within the broad scope of human and economic geography, specialization is encouraged in urban, transportation, energy policy, political and cultural ecology. Cartography retains an important position as a field of emphasis as well as a supplement to work in other facets of geography. A similar role is played by the sequence of courses and seminars on quantitative methods as applied to the various subfields of geography. Research and teaching are supported by well-equipped computational and cartographic laboratories, access to the University's computer, and the Department's extensive remote access and graphics terminal facilities.

Regional emphases, aside from elements of North American geography, are possible in Latin America, Europe-USSR, East and Southeast Asia. Opportunities for regional competence in geography are enhanced by well-developed interdisciplinary language and area programs for East Asia, Latin America, and Eastern Europe-USSR.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Admission to graduate standing requires superior academic performance at the undergraduate level and demonstrated competence in basic courses in physical, cultural, economic, quantitative methods, cartography and a regional course. Submission of GRE scores is required. The University follows the two-semester system with fifteen credit hours as the usual load. Half-time assistants are limited to a maximum of ten hours of classwork. Thesis hours, directed readings, and some course work are also offered during an eight-week summer session.

The Department offers a thesis and non-thesis track at the Master's level. The M.A. thesis program requirement is for thirty hours of graduate-level work, including the thesis. Two seminars and distribution requirements are designed to provide a core of training in regional, systematic fields, and skills. These are supplemented by courses in the student's area of interest. The non-thesis track requires thirty-six hours of graduate-level work including two research seminars. Students electing this option are not admitted to the Ph.D. program without completing a thesis in addition to the thirty-six hour requirement.

A greater degree of specialization is expected for the Ph.D. Sixty hours beyond the M.A. are required, including twenty to thirty hours of work on the dissertation. Various options are available for the language requirement, including reading knowledge of one foreign language and proficiency in a research skill related to the candidate's area of specialization.

Over three-fourths of graduate students in residence receive some financial support. Teaching and research assistantships within the Department, the Center for Research in Engineering Science, and the Center for Public Affairs constitute the major source of aid; some funds are available for the summer period. Other sources of support include Graduate School Honors Fellowships, Dissertation Fellowships, and the several categories of grants from the Office of Education, National Science Foundation, etc.

STAFF:

Robert T. Aangeenbrug, Ph.D., Wisconsin, 1965, Professor—transportation, economic, urban planning and computer graphics, Western Europe

John P. Augelli, Ph.D., Harvard, 1951, Professor—Latin America, political, settlement

John C. Davis, Ph.D., Wyoming, 1967, Adjunct Professor—statistical methods, computer graphics

Leslie Dienes, Ph.D., Chicago, 1968, Professor—industrial, economic, Eastern Europe and the Soviet Union

Joe R. Eagleman, Ph.D., Missouri, 1963, Professor—meteorology, climatology, water and energy budgets, microclimatology

George F. Jenks, Ph.D., Syracuse, 1950, Professor—cartography, computer application to map symbolization, conservation

William C. Johnson, Ph.D., Wisconsin, 1976, Assistant Professor—plant geography, physical

Walter M. Kollmorgen, Ph.D., Columbia, 1940, Emeritus Professor of Geography

A. William Kuchler, Ph.D., Munich, 1935, Emeritus Professor of Geography

Glen A. Marotz, Ph.D., Illinois, 1971. Associate Professor and Chairman—climatology, biogeography, field methods

Edward A. Martinko, Ph.D., Kansas, 1976, Adjunct Assistant Professor—applied remote sensing, ecological systems

George F. McCleary, Jr., Ph.D., Wisconsin, 1969, Associate Professor—map making and cartography

Robert W. McColl, Ph.D., Washington, 1964, Professor—political, traditional societies in transition, China and Southeast Asia

Robert E. Nunley, Ph.D., Michigan, 1958, Professor—population, quantitative methodology, Middle America

Valerie A. Preston, Ph.D., McMaster, 1978, Assistant Professor—urban/social, quantitative methods

James Shortridge, Ph.D., Kansas, 1972, Associate Professor—cultural, North America, historical

Thomas R. Smith, Ph.D., Columbia, 1943, Professor—economic, historical cartography, East Asia

Curtis J. Sorenson, Ph.D., Wisconsin, 1973, Associate Professor—soils, physical, photo interpretation, field methods

T. H. Lee Williams, Ph.D., Bristol, 1977, Assistant Professor—remote sensing, quantitative methods, physical

Robert F. Wiseman, Ph.D., Illinois, 1973, Associate Professor—economic, transportation, quantitative methods

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Gilmartin, Patricia. "The Map Context as a Source of Perceptual Error in Graduated Circle Maps," 1980.* Mf., Univ. Microfilms.

MacEachren, Alan. "Communication Effectiveness of Choropleth and Isopleth Maps: The Influence of Visual Complexity," 1979.* Mf., Univ. Microfilms.

Traylor, Charles T. "The Evaluation of a Methodology to Measure Manual Digitizing Error in Cartographic Data Bases," 1979.* Mf., Univ. Microfilms.

M.A.:

Blake, Stephen. "A Review of Wind-Related Geographic Parameters Which Affect the Selection and Evaluation of Sites for Wind Energy Conversion Systems," 1979.*

Demeo, V. James. "Preliminary Analysis of Changes in Kansas Weather Coincidental to Experimental Operations with a Reich Cloudbuster," 1979.*

Mandel, Rolfe. "Climatic and Vegetative Change Inferred from Alluvial Paleosols in Central and South-Central Texas," 1980.*

Williamson, Glen. "Equal Contrast Gray Scale for Choropleth Maps," 1980.*

Kent State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1914 GRADUATE PROGRAM FOUNDED: 1935

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 7 M.A., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 16 M.A. 13 Ph.D.
NOT IN RESIDENCE: 3 M.A. 7 Ph.D.

CHAIRMAN: Bart J. Epstein

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Brian P. Holly, Graduate Program Coordinator, Department of Geography, Kent State University, Kent, Ohio 44242
Telephone (216) 672-2045

PROGRAMS AND RESEARCH FACILITIES: The Department offers the Master of Arts and the Doctor of Philosophy degrees. Research facilities include an outstanding library, the University's map collection housed in the Department, ready access to Burroughs 6700 Computer and Calcomp Plotter; a Tektronix Graphics Terminal, digitizer, programmable calculators and key punch housed in the Department's data processing facility; Kargl Reflecting Projectors, Cesar Saltzman Reflecting Projector, Varityper Headliners, Leroy sets, Mirror stereoscopes, Bausch & Lomb stereo plotter, Kail Planimetric Plotters, situated in two excellent cartographic laboratories. Graduate students have ample office space within the Department.

The Master of Arts degree is designed for students who desire to pursue a course of intensive study and modern research in geography, and is planned particularly to meet the needs of those who expect to continue with a professional career either in academic or applied fields. Training in research techniques including quantitative methods, field investigations and the preparation of scholarly papers are emphasized. A thesis (or two substantial research papers) is required for the M.A.

The Doctor of Philosophy program encourages research and training in a variety of specializations under Urban Geography and Resource Analysis. Current faculty research interests include: analytical-quantitative, modeling, marketing, urban, behavioral, spatio-temporal processes, energy and water resources, regional economic development, population, cultural, medical, Soviet Union, land use planning, Eastern Europe, sub-Saharan Africa and India.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Kent State University operates on a semester system.

All applicants must meet the requirements of the Graduate College and the Department. Applicants for the M.A. program must have physical geography, regional geography of U.S. and Canada and a course in cultural, urban, economic or the like. As early as possible, coursework in cartography, field studies, statistics and quantitative methods, geographic thought and research and writing should be completed. Thirty-two semester hours' credit is required for the M.A.

Applicants for the Ph.D. program should have a Master's degree equivalent to Kent State's. Omissions can be made up at the doctoral level. Doctoral students must possess competence in quantitative techniques and field methods and pass competency examinations in foreign language (one at comprehensive or two at reading level according to GSFLT) or in Fortran IV before entering candidacy examinations. A doctoral dissertation is required. Sixty semester hours beyond the Master's is required for the Ph.D. and 30 of these credits are for dissertation.

Applications from qualified students representing all minority groups, the disabled and women are encouraged. The Department is able to support well qualified applicants with assistantship grants at both M.A. and Ph.D. levels of study.

*The Department currently has three Doctoral Teaching Fellowships each valued at $4500 per academic year. Other departmental appointments support approximately 20 persons at both the M.A. and Ph.D. levels. Academic year stipends are: M.A., $3050; Ph.D., $4000 and one University Fellowship (non-service) which pays $3200 per academic year. All appointments provide a partial fee remission of $935 per academic year. Graduate appointees are classed as Ohio residents for fee purposes. Appointments are for one academic year. M.A. appointments are renewable for a total of two years, Ph.D. appointments are renewable for a total of three years. Summer doctoral awards (non-service) valued at $600 plus partial fee waiver, are often available to doctoral students in addition to any other awards.

STAFF:

Surinder M. Bhardwaj, Ph.D., Minnesota, 1970, Professor—cultural, India, medical, geographic thought

Erich F. Bordne, Ph.D., Syracuse, 1954, Professor—climatology, water resources, conservation, North America, Western Europe

Bart J. Epstein, Ph.D., Clark, 1956, Professor and Chairman—urban, marketing, urban field studies, applied

Frank A. Erickson, Ph.D., Illinois, 1973, Assistant Professor—resources, Latin America, rural field studies

Milton E. Harvey, Ph.D., Durham (U.K.), 1966, Professor—quantitative, urban

Jordan A. Hodgkins, Ph.D., Syracuse, 1959, Professor of Soviet Geography—economic, natural resources, energy resources, U.S.S.R. and Eastern Europe

Brian P. Holly, Ph.D., Michigan State, 1974, Assistant Professor—urban, transportation, quantitative, computer cartography

Richard T. Lewis, Ph.D., Syracuse, 1970, Assistant Professor—urban, historical, economic, United States

Hallock F. Raup, Ph.D., UC, Berkeley, 1935, Emeritus Professor—cultural, historical toponymy, Anglo-America

James A. Rinier, M.A., Kent State, 1950, Professor—physical, soils, conservation, North America, Western Europe, rural field studies

Bradford L. Thomas, M.A., Kansas, 1958, Assistant Professor—urban, cartography, North America; on leave 1980-81

Alan J. Woods, Ph.D., UCLA, 1978, Visiting Assistant Professor—physical, air photo interpretation, cartography

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Dougherty, Michael. "The Effect of Certain Climate Conditions on the Differentiation of Peat Deposits from Other Surface Features in LANDSAT Imagery," 1979.

Ellis, Aaron W. "The Spatial Stratification of Baltimore and Its Black Community: 1960-1970," 1980.

Lindberg, Mark. "A Decision-Making Approach to Automated Cartography," 1979.

Matlock, Thomas S. "The Agro-Industrial Complex: A New Stage in The Soviet Union's Agrarian Program," 1979.

Ulan, Mary Ann. "The Geographic Implications of the Age and Sex Composition of the Non-Slavic Union Republics of the USSR: 1959 and 1970," 1979.

Wildman, Patricia J. "Some Determinants of Childhood Immunization Levels: A Comparative Study of Kent and Ravenna," 1979.

Willis, Patricia Anne. "Transformation of a Landscape: A Study of The Clay Industry in Tuscarawas County, Ohio, 1870-1940," 1979.

University of Kentucky

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1944 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 4 M.A.

GRADUATE STUDENTS IN RESIDENCE: 10 M.A. 5 Ph.D.
NOT IN RESIDENCE: 2 M.A. 3 Ph.D.

CHAIRMAN: Stanley Brunn

FOR CATALOG AND FURTHER INFORMATION WRITE TO: T. R. Leinbach, Director of Graduate Studies, Department of Geography, University of Kentucky, Lexington, Kentucky 40506
Telephone (606) 258-2931/2932

PROGRAMS AND RESEARCH FACILITIES: The Department offers a flexible approach to graduate education in geography. Except for a few methodological seminars, each graduate student has the responsibility to formulate his own program of study and research. Graduate advisors approve each student's program on the basis of its consistence in terms of the student's research interests and academic goals. Fields of concentration which doctoral candidates may select are:
CULTURAL GEOGRAPHY OF THE UNITED STATES - Urban and rural settlement patterns and processes, past and present; distribution and interaction of ethnic groups.
ECONOMIC GEOGRAPHY - Locational analysis; industrial location.
TRANSPORTATION GEOGRAPHY - Modeling, structure, and efficiency of transportation networks and flows; influence of transport systems on economic and social patterns.
MEDICAL GEOGRAPHY - Health care delivery; space, time, and illness behavior; epidemiology; disease ecology.
POLITICAL GEOGRAPHY - Topical analysis of the viability of political units; political aspects of development; the role of increasing economic interdependence in international affairs.
POPULATION GEOGRAPHY - Dynamics of population growth and change; internal migration.
URBAN GEOGRAPHY - Basic principles and theories of urban systems; social geography of the city; urbanization in developing countries.

REGIONAL DEVELOPMENT - Analysis of developmental change in South and Southeast Asia, the United States, Appalachia; urban and regional planning.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The academic year consists of two semesters and two summer sessions. Admission is based on an undergraduate grade-point average of 3.00 (A = 4.0). GRE scores should be submitted with application materials. Prospective students should submit two official transcripts of all previous college work and a written application at least two months before anticipated entrance. The department offers a number of teaching assistantships with stipends of about $400 per month for the academic year. Applications for assistantships should be submitted not later than March 1. Applications for University fellowships should be submitted on official forms not later than February 1.

STAFF:

W. A. Bladen, Ph.D., Kentucky, 1972, Associate Professor—remote sensing, planning, Middle and Far East, Kentucky and Southeast United States

Stanley Brunn, Ph.D., Ohio State, 1966, Professor and Chairman—political, urban, social, futures

Robert Cromley, Ph.D., Ohio State, 1978, Assistant Professor—economic, transportation, computer cartography, quantitative methods

Thomas P. Field, Ph.D., North Carolina, 1948, Professor—settlement, Australia, Africa

Justin C. Friberg, Ph.D., Syracuse, 1977, Assistant Professor—urbanization, migration, field methods, Latin America

P. P. Karan, Ph.D., Indiana, 1956, Professor—political and economic, urban and regional planning, Central and South Asia

Thomas R. Leinbach, Ph.D., Pennsylvania State, 1971, Associate Professor and Director of Graduate Studies—transportation, development, economic, Southeast Asia

E. Cotton Mather, Ph.D., Wisconsin, 1951, Adjunct Professor—cultural geography, especially rural settlement

Karl B. Raitz, Ph.D., Minnesota, 1970, Associate Professor —cultural, settlement, North America

Gary Shannon, Ph.D., Michigan, 1970, Associate Professor—medical, urban

Richard Ulack, Ph.D., Pennsylvania State, 1972, Associate Professor—population, migration, development, Southeast Asia, Appalachia

W. A. Withington, Ph.D., Northwestern, 1955, Associate Professor—Southeast Asia, urban dynamics, regional development

Louisiana State University

DEPARTMENT OF GEOGRAPHY AND ANTHROPOLOGY

DATE FOUNDED: 1928 GRADUATE PROGRAM FOUNDED: 1933

DEGREES OFFERED: M.A., M.S. in both Geography and Anthropology, Ph.D. in Geography

GRANTED 7/1/79–6/30/80: 8 Masters, 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 38 M.A. 12 Ph.D.
NOT IN RESIDENCE: 7 M.A. 4 Ph.D.

CHAIRMAN: Robert A. Muller

FOR CATALOG AND FURTHER INFORMATION WRITE TO: W. V. Davidson, Graduate Coordinator, Department of Geography and Anthropology, Louisiana State University, Baton Rouge, Louisiana 70803
Telephone (504) 388-5942, 5943, 5944

PROGRAMS AND RESEARCH FACILITIES: Departmental emphases are cultural-historical geography and physical geography. In cultural-historical geography attention is directed toward settlement, agricultural, and historical geography in the southern United States, the tropics, and in Latin America. The combination of geography and anthropology in a single department provides the student of the cultural landscape with a unique opportunity to select methods from each discipline.

In physical geography attention is directed toward alluvial and coastal morphology, water-budget climatology, and closely related aspects of vegetation and soils. Regional emphases include the southern United States, the tropics, Latin America, and the Arctic. Close working ties connect the interested student with the Department of Geology, the Coastal Studies Institute, and the Center for Wetland Resources.

Research techniques are vital to the training in both the cultural and physical curricula, and courses in aerial photography, remote sensing, cartography, computer cartography, and statistics are offered. Fieldwork is especially encouraged and several trips are planned. Research by faculty and graduate students is underway in each Central American country, Mexico, West Africa, Korea, Japan, China, and throughout the southern U.S.

The 1.7 million volume library is especially strong in geography and anthropology with an outstanding journal collection. Aerial photo collections include coverage of Louisiana, Mexico, and parts of southeast Asia. Facilities for cartographic and aerial photo, and remote sensing interpretation, laboratories for sediment analysis and palynology, and an up-to-date computer graphics center with a terminal in the department are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Selection is based on compatibility of interests with departmental programs; on grades, letters of recommendation, and Graduate Record Examination scores. Undergraduates must have a minimum overall grade point average of 2.5 and a minimum of 3.0 for the last four semesters completed prior to application. Applicants for assistantships must take the GRE at the first opportunity; it is required for entrance into the program.

Graduate Assistantships start at $3600 for nine months and include the waiver of tuition (including nonresident fee) except for $55 per semester University fee and $25 transportation fee per semester. Research Assistantships are occasionally available to the highly qualified student. Grants for summer field work are available for the dedicated student.

FULL-TIME STAFF:

Nigel J. R. Allan, Ph.D., Syracuse, 1978, Assistant Professor—biocultural geography, South and Southwest Asia

Roland E. Chardon, Ph.D., Minnesota, 1961, Professor—cultural, Latin America

William V. Davidson, Ph.D., Wisconsin-Milwaukee, 1972 Associate Professor—cultural, historical, Caribbean, Central America

Jay D. Edwards, Ph.D., Tulane, 1970, Associate Professor—anthropology, Latin America

Sharon I. Goad, Ph.D., Georgia, 1978, Assistant Professor—archaeology, southeastern Indians

Sam B. Hilliard, Ph.D., Wisconsin, 1966, Professor—historical, agricultural, Anglo-America

Richard H. Kesel, Ph.D., Maryland, 1971, Associate Professor—geomorphology. soils, biogeography

Philip B. Larimore, M.S., Virginia, 1954, Assistant Professor—cartography

Robert A. Muller, Ph.D., Syracuse, 1962, Professor—climatology, hydrology, North America

Robert W. Neuman, M.A., Louisiana State, 1956, Assistant Professor and Curator of Anthropology—archaeology, prehistoric ecology, Southeastern United States

Milton B. Newton, Jr., Ph.D., Louisiana State, 1967, Professor—cultural, prehistoric settlement, Louisiana, U.S. Southeast

Douglas W. Owsley, Ph.D., Tennessee, 1978, Assistant Professor—physical anthropology, paleodemography

Robert R. Rathburn, Ph.D., Wisconsin, 1976, Assistant Professor—linguistics, Pacific Northwest

Miles R. Richardson, Ph.D., Tulane, 1965, Professor—material culture and behavior, Spanish America

Donald E. Vermeer, Ph.D., UC, Berkeley, 1964, Professor—cultural, physical, Africa

H. J. Walker, Ph.D., Louisiana State, 1960, Boyd Professor—alluvial and coastal morphology, geomorphology, Arctic

Frederick M. Wiseman, Ph.D., Arizona, 1978, Assistant Professor—biogeography, Quaternary paleoecology, Middle America

A position in remote sensing to be filled.

PART-TIME STAFF:

William G. Haag, Ph.D., Michigan, 1948, Alumni Professor Emeritus—ethnology, archaeology, West Indies

Fred B. Kniffen, Ph.D., UC, Berkeley, 1930, Boyd Professor Emeritus—cultural, ethnology, Louisiana, Eastern U.S.

William G. McIntire, Ph.D., Louisiana State, 1954, Professor Emeritus—geomorphology, archaeology, coastal environments

Robert C. West, Ph.D., UC, Berkeley, 1946, Boyd Professor Emeritus—cultural, historical, ethnology, Latin America

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Easterly, Ernest St. C. III. "Geojurisprudence: Studies in Law, Liberty, and Landscapes," 1980. Mf., Univ. Microfilms.

Kim, Soon Tae. "A Quantitative Evaluation of Landsat for Monitoring Suspended Sediments in a Fluvial Channel," 1980. Mf., Univ. Microfilms.

Master's:

Dixon, Clifton V., Jr. "Coconuts and Man on the North Coast of Honduras: An Historical Geographical Perspective," 1980.

Futch, Robin S. "Prehistoric Human Ecology at the Morton Shell Mound Site (161IB3), Iberia Parish, Louisiana," 1979.

Hilding, Randy K. "Temperature Regimes of South Louisiana Landscapes in the Context of Synoptic Climatology," 1979.

Kress, Margaret Rose. "Geomorphology of Tunica Bayou, Louisiana," 1979.

Meyer-Arendt, Klaus. "The Guava in the Upper Suarez Basin of Southern Santander and Adjacent Boyaca, Colombia: A Geographical Perspective," 1979.

Penland, Patrick Shea. "Geomorphological Effects of Jetty Construction near Fort George Inlet, Florida," 1979.

Thormeyer, John O. "Structural Analysis of the Navajo Coyote Tales," 1980.

Woodiel, Deborah K. "The St. Gabriel Site: A Late Coles Creek-Plaquemine Occupation in Southeast Louisiana," 1980.

Mankato State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1964 GRADUATE PROGRAM FOUNDED: 1964

DEGREES OFFERED: M.S., M.A., M.A.T., M.S. Junior College Teaching

GRANTED 7/1/79–6/30/80: 6

GRADUATE STUDENTS IN RESIDENCE: 14
NOT IN RESIDENCE: 5

CHAIRMAN: James F. Goff

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Department of Geography, Mankato State University, Mankato, Minnesota 56001
Telephone (507) 389-2617

PROGRAMS AND RESEARCH FACILITIES: The department stresses broad preparation for advanced graduate work, preparation for teaching at various levels, and careers in applied geography. Major strengths are in urban and regional planing and in techniques. The M.A. requires a language or statistical skill, plus a thesis or internship; the M.S. also permits an alternate paper. The department maintains a small book and map library, a well-equipped cartography laboratory (including an Apple II microcomputer, Numonics digitizer, a process camera and complete darkroom facilities) and a wide variety of field and laboratory equipment. A UNIVAC 1100/80 Computer is readily available for graduate student and faculty use; graphics support includes a Tektronix terminal, a Complot DP-1 drum plotter, and a growing library of applications software. The University library has most of the major U.S. geographic journals and is a depository of the U.S. Government and the United Nations. The University library has a substantial map collection and is an AMS and USGS depository.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Students must fulfill the requirements for admission to the Graduate College and be admitted by the department for the degree program desired. The department has a limited number of graduate assistantships.

STAFF:

Lawrence C. Anderson, Ed.D., Idaho, 1968, Professor—geographic education, agriculture, polar lands

Darrell F. Apitz, M.S., Mankato State, 1963, Assistant Professor—physical, regional

Branko Colakovic, Ph.D., Minnesota, 1970, Associate Professor—Eastern Europe, cultural, urban

William A. Davenport, Ph.D., Oregon, 1971, Professor—biogeography, tropical agriculture, Latin America

Mary T. Dooley, Ph.D., Michigan State, 1975, Professor—historical, Anglo-America

William W. Girard, Ph.D., Iowa, 1976, Associate Professor—geomorphology, quantitative techniques

James F. Goff, Ph.D., Illinois, 1970, Professor and Chairman—political, Soviet Union, military

Philip S. Kelley, Ph.D., Washington, 1977, Associate Professor—cartography, image interpretation, environmental quality, computer techniques

Miriam Kui Kiaw Lo-Lim, Ph.D., Western Ontario, 1973, Assistant Professor—cultural, economic development

Donald Roscoe, M.S., Mankato State, 1966, M.S., Houston, 1968, Assistant Professor—earth science education, physical

George Stoops, M.S., AIP, Illinois, 1968, Associate Professor—urban and regional planning

David L. Thurston, M.S., Chicago, 1964, Associate Professor—manufacturing, recreation, quantitative techniques

Perry S. Wood, Ph.D., Nebraska, 1973, Associate Professor—urban, field methods

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

M.S.:

Hoff, David A. "The Geographic Feasibility of the Proposed Palestinian State," 1979.*

University of Maryland

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1941 GRADUATE PROGRAM FOUNDED: 1941

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 3 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 19 M.A. 18 Ph.D.
NOT IN RESIDENCE: 12 M.A. 10 Ph.D.

CHAIRMAN: Kenneth E. Corey

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Kenneth E. Corey, Chairman, Department of Geography, University of Maryland, College Park, Maryland 20742
Telephone (301) 454-2241

PROGRAMS AND RESEARCH FACILITIES: Graduate programs are designed to provide individual specialization. Departmental specialties are:

PHYSICAL: specialization in process geomorphology, morphometric analysis, microclimatology, and water resources. Interdisciplinary study in support of the selected specialization is encouraged.

CULTURAL: with particular attention to historical geography. Broad interdisciplinary approach is encouraged. Special interest in tropical areas, health and disease, and resource use.

METROPOLITAN STUDIES: with emphasis on the functions, internal structure and interrelationships, and planning of urban areas. This specialty encompasses quantitative, historical, and systems approaches to urban problems. It is supported particularly by work in the University's behavioral and social sciences departments.

NEW DIRECTIONS: the faculty is in the midst of developing additional graduate study options; these will include emphasis on professional geographic careers and geographic methods. Developing specialties will include: computer mapping applications, geomorphic processes, and planning and policy issues in geography.

REGIONAL: specialization is possible in several areas (see staff listings).

The University of Maryland is eight miles (20 min.) from the incomparable library and research facilities of Washington, D.C. Its location in the Baltimore-

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Washington urban region provides students with the opportunity to examine at first hand the southern portion of Megalopolis, while the proximity of the Appalachians, the Piedmont and the Coastal Plain with the Chesapeake Bay offers additional research challenges. The department's new quarters include separate teaching and research labs for physical geography and cartography, complete darkroom facilities, and a self-instruction laboratory.

The Department's Computer Mapping Laboratory is supported by a dedicated PRIME 550 minicomputer or the University's UNIVAC mainframe computers; computer graphics terminals include Tektronix 4014, two Tektronix 4025 raster terminals, one with graphics memory, and a stand-alone Tektronix 4051, a BASIC programmable graphics terminal with cartridge tape input. Output devices include a Tektronix interactive digital plotter and a Tektronix hand-copy unit. Data capture is achieved by two Tektronix digitizing tablets and an ALTEK backlighted table. Ancillary video projection equipment enables computer-generated displays to be demonstrated before large groups. A gaming simulation room with decwriters is located in the building.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester. Admission (M.A. and Ph.D.): B (3.0) average, Graduate Record Examination (verbal and mathematical), and three letters of recommendation. Ph.D. students should provide a complete statement of areas of specialization together with research plans. Financial support: Graduate Assistantships currently provide a stipend of $4800 for new graduate students and additional steps for Ph.D. students plus remission of tuition and are renewable. Various competitive university fellowships and government-supported traineeships are available.

STAFF:

Harold Brodsky, Ph.D., Washington, 1966, Associate Professor—economic development, quantitative, urban

Maureen A. Charron, Ph.D. candidate, Maryland, Lecturer—process geomorphology

Antonio F. Chaves, Ph.D., Havana, 1946, Associate Professor and Assistant Chairman—hispanic world, political, historical

Charles M. Christian, Ph.D., Illinois, 1975, Assistant Professor (joint appointment with Urban Studies)—urban social policy, minorities in public service

Joseph Cirrincione, Ph.D., Ohio State, 1970, Associate Professor (joint appointment with Secondary Education)—geography in education

Kenneth E. Corey, AICP, Ph.D., Cincinnati, 1969, Professor and Chairman (joint appointment in planning)—planned organizational change, community planning, neighborhood grantsmanship

Walter W. Deshler, Ph.D., Maryland, 1957, Visiting Professor—remote sensing

L. Schuyler Fonaroff, Ph.D., Johns Hopkins, 1961, Professor and Director of Graduate Studies—cultural, medical, biogeography

Paul A. Groves, Ph.D., UC, Berkeley, 1969, Associate Professor—urban, historical metropolitan structure, ethnic groups in cities

Robert A. Harper, Ph.D., Chicago, 1950, Professor—urban systems in modern societies, geography in education

Michael S. Kearney, Ph.D. candidate, Western Ontario, Lecturer—environmental geomorphology, soils, remote sensing

John Langdale, Ph.D., Hawaii, 1978, Visiting Associate Professor—telecommunications industries

Robert D. Mitchell, Ph.D., Wisconsin, 1969, Associate Professor—historical, cultural, European overseas colonization

Donald Petzold, Ph.D., McGill, 1980, Assistant Professor—climatology, microclimatology, high latitude climatology

Stephen W. Sawyer, Ph.D., Clark, 1980, Assistant Professor—energy, environmental policy, pollution

Terry A. Slocum, Ph.D. candidate, Kansas, Lecturer—cartography, computer applications, quantitative methods

Derek Thompson, Ph.D., Indiana, 1966, Associate Professor, Acting Director, Division Computer Center—transportation, locational analysis of urban and regional systems, population migration

Martha Vill, Ph.D., Maryland, 1976, Lecturer—historical urban, land development, nineteenth century urbanization

Joseph W. Wiedel, M.A., Maryland, 1963, Associate Professor—cartography

Robert W. Wiseman, Ph.D., Illinois, 1973, Visiting Associate Professor—transportation, social, elderly

Wilbur Zelinsky, Ph.D., UC, Berkeley, 1953. Visiting Professor—population, cultural, historical, North America

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Allman, John M. "Yeoman Regions in the Antebellum Deep South: Settlement and Economy in Northern Alabama, 1815–1860," 1979.

Rumney, Thomas A. "Post-Frontier Adjustment in Regional Settlement Structure: A Case of Clinton County, New York, 1850–1880," 1980.

Master's:

Clawson, Mary Grace. "Evolution of Symbols on Nautical Charts Prior to 1800," 1980.

McNamara, James D. "Change in Wave Refraction Pattern and Shore Configuration in the Vicinity of Chincoteague Inlet, Virginia, 1851–1967," 1979.

Peebles, Lucy V. "Leisure Time and Indoor Recreational Activities of Blacks: Perceptions and References, Baltimore 1940–1978," 1979.

University of Massachusetts (Amherst)

DEPARTMENT OF GEOLOGY AND GEOGRAPHY

DATE FOUNDED: 1967 GRADUATE PROGRAM FOUNDED: 1980

DEGREES OFFERED: M.S.

GRANTED 7/1/79–6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 0
NOT IN RESIDENCE: 0

CHAIRPERSON: George M. McGill

FOR CATALOG AND FURTHER INFORMATION WRITE TO: James A. Hafner, Department of Geology and Geography, University of Massachusetts, Amherst, Massachusetts 01003
Telephone (413) 545-2286

PROGRAMS AND RESEARCH FACILITIES: Research in progress relates to land and water management, rural development in the U.S. and Southeast Asia, climatic change in the arid U.S. and arctic regions, and migration patterns in Latin America. Facilities include cartographic and photographic facilities, a computer center, and in the near future, a major remote sensing facility. This new M.S. program will cooperate closely with allied programs including regional planning, geology, anthropology, physics, the Five College Asian Studies Program, the National Park Service Cooperative Unit, and the Water Resources Research Center.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Prior undergraduate work in geography is not required. A cumulative average of 2.75 (4 point system) or equivalent is required. Deadlines for applications are March 1 for the fall semester and October 1 for the spring semester. Thesis or non-thesis tracks are available.

STAFF:

Raymond S. Bradley, Ph.D., Colorado, 1974, Associate Professor—arctic climatology, climatology, physical geography

Terence Burke, Ph.D., Birmingham, 1967, Associate Professor—economic and political geography, Western Europe

James A. Hafner, Ph.D., Michigan, 1977, Associate Professor—underdeveloped areas, resource use, Southeast Asia

E. Bruce MacDougall, Ph.D., Toronto, 1967, Associate Professor—regional planning, land resource inventory, remote sensing

Allen McNeill, Ph.D. candidate, Illinois, Visiting Lecturer—physical geography, recreation, Oceania

David R. Meyer, Ph.D., Chicago, 1970, Associate Professor—economic, quantitative methods, urban historic

Rutherford H. Platt, J. D., Chicago, 1967; Ph.D., Chicago, 1971, Associate Professor—land and water resource management, planning law

Richard W. Wilkie, Ph.D., Washington, 1967, Associate Professor—cartography, environmental perception, migration, Latin America

GEOLOGY FACULTY:

Joseph H. Hartshorn, Ph.D., Harvard, 1955, Professor—glacial geomorphology, arctic and New England

Memphis State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1962 GRADUATE PROGRAM FOUNDED: 1952

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/79–6/30/80: 4

GRADUATE STUDENTS IN RESIDENCE: 8
NOT IN RESIDENCE: 6

CHAIRMAN: W. Theodore Mealor, Jr.

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Adviser, Department of Geography, Memphis State University, Memphis, Tennessee 38152
Telephone (901) 454-2386

PROGRAMS AND RESEARCH FACILITIES: Graduate study in Geography at Memphis State provides opportunities in three general areas: (1) environment and earth sciences (emphasis upon atmosphere and landforms); (2) human-economic geography (including urban-rural systems, land use, industrial location and transportation, and behavioral aspects of urban geography); and (3) geographic techniques (including aerial photo interpretation and remote sensing, cartography and map production, and computer mapping). Each program consists of a minimum of 30–33 hours (thesis or non-thesis) and is designed by the student in consultation with his adviser to assure that technical skills and research capabilities are developed. Corollary areas of study in other departments are available to support the major interests.

The location of the University in a large urban area, yet in the heart of one of the nation's leading agricultural regions, and within a half-day's drive of five physiographic provinces, provides an ideal workshop for a variety of environmental and cultural topics. Departmental facilities insure ample space for student offices and research activities. The Department maintains a graphics terminal, digitizer, and plotter, a micro-computer (for graphics and basic image processing), a darkroom and a variety of cartographic and remote sensing equipment that support not only academic and research endeavors but also the activities of the Cartographic Services Laboratory.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University is on the semester system. Acceptance by the University Graduate School is prerequisite to admission by the Department. The Graduate School requires all applicants to submit transcripts of all college grades and to present satisfactory scores on either the Graduate Record Examination or the Miller Analogies Test. Three letters of recommendation are required by the Department for all students seeking financial aid.

Financial aid in the form of teaching and research assistantships are available. Teaching assistants normally teach introductory physical geography laboratories or assist in the human-economic and cartography courses. Stipends provide a minimum of $3,300 for eight months and carry exemption from out-of-state tuition fees.

STAFF:

Melvin C. Barber, Ph.D., Southern Illinois, 1971, Associate Professor—marketing, urban analysis, industrial location, U.S. South

Orton C. Butler, Ph.D., Ohio State, 1969, Associate Professor—climate, soils, water resources, Asia

John H. Corbet, Ph.D., Florida, 1966, Associate Professor—geomorphology, aerial photo interpretation, hazards, U.S.S.R.

Howard E. Frye, M.A., Michigan, 1954, Assistant Professor—Europe

John T. Matson, Ph.D., Ohio State, 1979, Assistant Professor—behavioral, urban, computer applications, quantitative

W. Theodore Mealor, Jr., Ph.D., Georgia, 1972, Professor—land use, remote sensing, transportation, Anglo-America

L. Arnold Siniard, M.A., Memphis State, 1964, Assistant Professor—resource management, agriculture

John A. Sobol, Ph.D., Michigan, 1961, Professor—atmosphere, cartography, Latin America

Charles T. Traylor, Ph.D., Kansas, 1979, Associate Professor and Director, Cartographic Services Laboratory—cartography, remote sensing

Helen Turner, M.S., Memphis State, 1978, Part-time Instructor—physical

Miami University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1906 GRADUATE PROGRAM FOUNDED: 1929

DEGREES OFFERED: M.A., M.A. in Teaching

GRANTED 7/1/79-6/30/80: 8

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 8

CHAIR: John L. Thompson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: John C. Klink, Department of Geography, 216 Shideler Hall, Miami University, Oxford, Ohio 45056
Telephone (513) 529-4728

PROGRAMS AND RESEARCH FACILITIES: The M.A. program is a broadly conceived professional curriculum for students intending to pursue work in geography beyond the master's degree or to enter directly into local and federal government or industrial employment. The department operates in the belief that the M.A. degree should further broaden the student's geographical background, but the program is sufficiently flexible to allow for strengthening his systematic or regional interest. Areas of emphasis include Urban Analysis and Physical-Environmental Analysis. The M.A. with a thesis or practicum requires a minimum of 36 hours including 30 hours of course work. An all course work option is available and requires completion of 45 credit hours. The University provides corollary strengths in the social sciences and languages for students with urban, political, European, and Latin American interests.

The M.A.T. program requiring 36 hours of course work is designed for students certified to teach and intending to pursue a school teaching career.

The department occupies new facilities, utilizes a modern cartography and aerial photography laboratory, map and photo collections, reproduction equipment, calculators, digitizer, keypunch, graphics terminal, climatology/meteorology instrumentation, and soil lab equipment. All students have access to the facilities of the Computing Center, Scripps Foundation for Research in Population Problems, and the Audio-Visual Service.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* Semester System. *Admission Requirements:* Bachelor's degree from an accredited college or university; cumulative minimum grade point average of 2.5 (of a possible 4.0); departmental approval. *Financial Aid:* Graduate Assistantships: Average stipend $3900 plus remission of out-of-state tuition and instruction fee. *Grants-in-aid:* Tuition.

STAFF:

Robert S. Bacon, Ph.D. (Psychology), Nebraska, 1955, Ph.D. (Geography), Colorado, 1975, Associate Professor—population, behavioral-cultural, urban

Martin E. Dulgarian, Ph.D., Michigan, 1965, Associate Professor—Asia, history and philosophy of geography, political

Jerry E. Green, Ph.D., North Carolina, 1976, Assistant Professor—physical natural resources, land use planning, remote sensing

John C. Klink, Ph.D., Minnesota, 1974, Associate Professor—climatology, soils

Howell C. Lloyd, Ph.D., Northwestern, 1964, Professor—political, Europe, settlement

Byron E. Logan, Ph.D., North Carolina, 1956, Associate Professor—Africa, economic, Brazil

James M. Rubenstein, Ph.D., Johns Hopkins, 1975, Assistant Professor—planning, urban policy analysis, new towns

Lee H. Slorp, Ph.D., Illinois, 1977, Assistant Professor—plant geography, land forms, cartography, remote sensing

Richard V. Smith, Ph.D., Northwestern, 1957, Professor--urban, population, recreation

John L. Thompson, Ph.D., Wisconsin, 1955, Professor and Chair—conservation, Soviet Union, energy resources

Joseph T. Urell, Ph.D., Cincinnati, 1976, Assistant Professor—urban-residential mobility, twentieth-century geographic thought

Cyrus W. Young, Ph.D., Michigan State, 1970, Associate Professor—transportation, urban, urban planning

TITLES OF THESES COMPLETED 7/1/79–6/30/80:
Master's:

Allen, Terry L. Research Paper: "Attitudes Towards Water Resource Development in the Colorado River Basin," 1979.*

Alsup, Leroy D. Practicum Report: "Recreation Planning for the 1980 Ohio SCORP," 1979.*

Lewis, Norma M. Practicum Report: "A Practicum with the U.S. Army Corps of Engineers," 1979.*

Mraz, James E. Practicum Report: "A Study on Displacement in Revitalizing Neighborhoods," 1979.*

Samy, Sana. "An Analysis of Industrial Location Patterns in Egypt: An Historic Approach," 1979.*

University of Miami

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1971

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 5
NOT IN RESIDENCE: 4

CHAIRMAN: Peter O. Muller

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Thomas D. Boswell, Graduate Advisor, Department of Geography, P.O. Box 248152, University of Miami, Coral Gables, Florida 33124
Telephone (305) 284–4087

PROGRAMS AND RESEARCH FACILITIES: The University of Miami is located in a growing, uniquely cosmopolitan urban area on the margins of the Caribbean. Appropriately, the Department of Geography has particular strength in the fields of urban geography and tropical area studies (in combination with the Center for Advanced International Studies). Programs leading to the Master's Degree tend to focus systematically upon urban problems and regionally upon tropical studies, though not to the exclusion of other combinations; there is much flexibility and arrangements are made to serve individual needs. The possibilities involved are reflected by the faculty's areas of specialization, given below.

The Department's facilities incorporate a large map library and a cartographic laboratory whose equipment includes a darkroom and complete color production facilities. The University Library houses a substantial collection of geographic literature; modern computer facilities exist on the campus. The University maintains field stations, available for use by the Department, at Pigeon Key (an island in the Florida Keys) and in the Everglades.

The *Transactions of the Miami Geographical Society* are published in the Department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Miami operates on the semester system. The general requirements for the M.A. include (1) thirty credits at the graduate level, of which 18 should be in the major and 6 in the thesis work, (2) successful completion of the core program; including courses in field research, cartography, methodology, and quantitative analysis, (3) an adequate performance in three two-hour written examinations, and (4) submission and successful oral defense of a Master's thesis. Applicants should have a B average in their undergraduate work and should have a combined four-figure score in the Graduate Record Examination. Financial aid includes Departmental assistantships ($3100) and University Fellowships.

STAFF:

Thomas D. Boswell, Ph.D., Columbia, 1973, Associate Professor—population, social, Middle America and the Caribbean, urban

Donald L. Capone, Ph.D., Michigan State, 1971, Associate Professor—cartography, crime, East Africa, resource management

James R. Curtis, Ph.D., UCLA, 1978, Assistant Professor—cultural, historical, urban

Harm J. deBlij, Ph.D., Northwestern, 1959, Professor—political, Southern Africa

Peter O. Muller, Ph.D., Rutgers, 1971, Professor and Chairman—urban, economic, social

J. Warren Nystrom, Ph.D., Clark, 1942, Professor—Latin America, political

Ira M. Sheskin, Ph.D., Ohio State, 1977, Assistant Professor—quantitative, transportation, urban

An additional faculty member will be appointed in fall 1980.

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Zakoski, Kimberly J. "The Effects of Length of Residence and Stage Migration on the Demographic Characteristics of a Haitian Community in Miami, Florida," 1980.

Michigan State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1955 GRADUATE PROGRAM FOUNDED: 1952

DEGREES OFFERED: M.A., M.S., M.A.T., Ph.D.

GRANTED 7/1/79–6/30/80: 6 Masters, 4 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 47 Masters 26 Ph.D.
NOT IN RESIDENCE: 22 Masters 14 Ph.D.

CHAIRMAN: Gary A. Manson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Admissions Committee or Gary Manson, Chairman, Department of Geography, M.S.U., East Lansing, Michigan 48824
Telephone (517) 355-4649

PROGRAMS AND RESEARCH FACILITIES: Graduate programs are designed to give various levels of professional competence in the tools, substance, methodology and theory of geography. Systematic fields of emphasis are urban-economic, physical, and cartography-remote sensing with other programs possible as indicated by faculty specializations. Faculty research and travel give regional strength in Africa, Latin America, Europe, East Asia and the United States.

Strong supporting fields include the social sciences, history, soils, geology, food sciences, community medicine, resource development, marketing, urban planning, recreation, and transportation. Geographic study and research are facilitated by the African, Asian, and Latin American Studies Center, the College for Urban Development, and the University Computer Center.

Vocationally oriented programs lead to specializations in cartography, computer applications, and social services analysis. A land use Master's option is available.

The MSU library contains well over 2 million volumes and a map library. The Department facilities include an extensive aerial photo collection, a well-equipped cartography laboratory and a Center for Cartographic Research and Spatial Analysis, a computer terminal in the Department, and easy access to the University CDC 6500 computer including a Tektronix terminal for automated map reproduction. University housing includes numerous on-campus apartments and a graduate dormitory.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan*—quarter system. *Admission requirements for M.A.*—completion of an undergraduate degree with a 3.4 average for the last two academic years; encourage any qualified student to apply. *Ph.D.*—completion of master's degree or equivalent, satisfactory grade-point average.

Teaching assistantships, university scholarships, research assistantships in cartography, M.S.U. Graduate Office scholarships, and other awards are available. Quarter-time stipends beginning at $2272 and half-time stipends starting at $5004 are available depending on the degree held (1979-80 rates). Deadline for applications is February 15 for financial aid the following autumn.

STAFF:

Georg Borgstrom, D.Sc., Lund, 1939, Professor—population, world food and water resources, ecological geography

Dieter Brunnschweiler, Ph.D., Zurich, 1952, Professor—physical, remote sensing, Latin America

David Campbell, Ph.D., Clark University, 1977, Assistant Professor—Africa, social/economic change in developing world

Michael Chubb, Ph.D., Michigan State, 1967, Associate Professor—recreation geography, resource geography, environmental quality, research methods

Joe T. Darden, Ph.D., Pittsburgh, 1972, Associate Professor—urban-social, cultural, U.S.

Richard Groop, Ph.D., Kansas, 1976, Assistant Professor—cartography, population

Jay R. Harman, Ph.D., Illinois, 1968, Associate Professor—physical (plant geography, synoptic climatology)

John M. Hunter, Ph.D., Reading, 1954, Professor—medical, Africa

Daniel Jacobson, Ph.D., Louisiana State, 1954, Professor—cultural-historical, education

Gary A. Manson, Ph.D., Washington, 1970, Associate Professor—geographic education

Ian M. Matley, Ph.D., Michigan, 1961, Professor—cultural, U.S.S.R., East Europe

Assefa Mehretu, Ph.D., Johns Hopkins, 1969, Visiting Associate Professor—economic development, location theory, Africa

Bruce W. Pigozzi, Ph.D., Indiana, 1979, Assistant Professor—economic, transportation, quantitative

Richard M. Smith, D.A., Northern Colorado, 1974, Assistant Professor—cartography, social

Lawrence M. Sommers, Ph.D., Northwestern, 1950, Professor—methodology, Western Europe

Robert N. Thomas, Ph.D., Pennsylvania State, 1968, Professor—population, migration systems, Latin America

Clarence L. Vinge, Professor Emeritus

Jack Williams, Ph.D., Hawaii, 1973, Associate Professor—agricultural, East Asia, Southeast Asia, cartography

Harold A. Winters, Ph.D., Northwestern, 1960, Professor—physical (geomorphology), Michigan

Robert I. Wittick, Ph.D., Iowa, 1972, Associate Professor—transportation, information systems, quantitative, computer techniques

Additional faculty will be appointed.

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/780

Ph.D.:

Batkins, Donald. "Toward a Model of Economic Development: A Comparison Study of Taiwan and Hainan, 1895 to 1975," 1979.

Bennett, William D. "A Location-Allocation Planning Study for Primary Health Care Facilities in the Lansing, Michigan Area," 1979.

Johnson, James H., Jr. "Incumbent Upgrading and Spot Gentrification in the Inner City: A Case Study of Neighborhood Revitalization Activities in Eastown, Grand Rapids," 1980.

Lang, Marvel. "Historic Settlement and Residential Segregation in Local Neighborhoods of Jasper County, Mississippi, 1900–77," 1979.

Richardson, Douglas. "The Indian Lands Study: An Example of the Application of Geographic Research to the Analysis of Complex Energy and Environmental Policy Issues," 1980.

Master's:

Al-Shomrany, Salih. "Types, Distribution, and Significance of Agricultural Terraces in Assarah, Saudi Arabia," 1980.

Atiyah, Asaad. "The Perception of Noise: A Survey Study around Jeddah International Airport, Saudi Arabia," 1980.

Borchers, Debbie L. "Geographic Aspects of the Control of Measles: With Special Reference to Michigan and Geographic Aspects of Hypertension," 1980.

Cole, Daniel. "Psychophysical Testing in Cartography: An Evaluation of Methodology," 1979.

Hart, John A. "Nomadic Hunters and Village Cultivators: A Study of Subsistence Interdependence in the Ituri Forest of Zaire," 1979.

Nelson, Frederick E. "Patterned Ground in the Icefield Region, Alaska—British Columbia," 1979.

Sambrook, Richard. "Historical Lingaments in the Straits of Mackinac: An Investigation in Cultural Cartography," 1980.

Veness-Randle, April. "The Socio-Spatial Lifecycle of a Company Town: Calumet, Michigan," 1979.

The University of Michigan

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1923 GRADUATE PROGRAM FOUNDED: 1923

DEGREES OFFERED: M.A., M.S., Ph.D.

GRANTED 7/1/79–6/30/80: 4 Master's, 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 11 Masters 16 Ph.D.
NOT IN RESIDENCE: 2 Masters 5 Ph.D.

CHAIRMAN: John D. Nystuen

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Admissions Secretary, Department of Geography, 4028 LSA Building, The University of Michigan, Ann Arbor, Michigan 48109
Telephone (313) 764–0340

PROGRAMS AND RESEARCH FACILITIES: *Systematic Human Geography:* Two focuses include urban, social and transportation geography in the industrial nations and cultural and ecological processes in the developing nations. Interdisciplinary contacts throughout the University include Transportation Studies, Urban and Regional Planning, Center for Research on Economic Development and Area Study Centers.

Physical Geography: Fields of study include climatology; glaciology; alpine, polar and subpolar environments; soils and plant geography in relation to geomorphic processes. Facilities include physical geography laboratories and field equipment.

Theoretical Geography: Formal geographical theory is presented in subject matter courses and quantitative methods courses. Exceptional computer facilities and cognate courses on social sciences methodology are available at the University.

Cartography: The department offers training in the history of cartography, modern concepts of analytical cartography and computer assisted cartography. The department participates in remote sensing and photogrammetry programs. Facilities include cartographic laboratories, dark room and graphic computer laboratory.

History of Geography. A unique collection of rare books, manuscripts, atlases and maps on the history of cartography and exploration is available in the Clements Library. In addition the University Library has a large map collection.

Regional Geography: Several members of the staff have major interest and extensive field experience in South, Southeast and East Asia; the Near East and North Africa; Europe and the Soviet Union. The University's resources for the study of Asia make it a leading center in the world.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Trimester system. *Admission Requirements:* Applications for admission are invited from students with superior records in geography as well as students with strong backgrounds in the social or natural sciences who desire professional training in geography. An application and a booklet which contains information for prospective graduate students may be obtained upon request from the department. Requests for the Graduate School catalog should be directed to the Mail Room, Horace H. Rackham School of Graduate Studies, The University of Michigan, Ann Arbor, MI 48109. The Department of Geography requires that applicants submit GRE scores and three letters of recommendation whether or not they are applying also for financial aid. Early application is desirable, not later than February 1 for admission the following autumn. *Financial aid:* The department grants various kinds of financial assistance to graduate students and may also recommend students for support from sources outside the department. An application for financial aid is forwarded with the admission application and should be returned to the Department of Geography. The majority of resident graduate students are supported by fellowships and scholarships including the following: Rackham School of Graduate Studies fellowships and scholarships, teaching assistantships and program fellowships in the Graduate School.

STAFF:

Gordon R. Brewster, Ph.D., Western Ontario, 1979, Assistant Professor—soils, environmental systems

Kathleen M. Brown, Ph.D., Minnesota, 1976, Assistant Professor—urban, economic

James D. Clarkson, Ph.D., Chicago, 1967, Associate Professor—cultural, Southeast Asia

Donald R. Deskins, Jr., Ph.D., Michigan, 1970, Professor and Associate Dean, Rackham School of Graduate Studies—urban, social

L. A. Peter Gosling, Ph.D., Michigan, 1958, Professor—Southeast Asia

George Kish, D.Sc., Budapest, 1939, Ph.D., Michigan, 1945, Professor—political, U.S.S.R., Europe

John F. Kolars, Ph.D., Chicago, 1963, Professor—cultural, non-Western resource use, Near East

Ann E. Larimore, Ph.D., Chicago, 1958, Professor—cultural, cultural ecology

Rhoads Murphey, Ph.D., Harvard, 1950, Professor—historical, China, South Asia

John D. Nystuen, Ph.D., Washington, 1959, Professor—theoretical, urban, regional planning

Samuel I. Outcalt, Ph.D., British Columbia, 1970, Professor—physical, climatology, arctic geomorphology

Richard A. Taketa, Ph.D., Washington, 1979, Assistant Professor—cartography, urban, remote sensing

Susan Trussler, Ph.D. candidate, Pennsylvania State, Assistant Professor—economic, spatial analysis, transportation, land use

One position to be filled.

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Hamid, Abdullah Abdul. "Socio-economic Regionalization and Its Implications for Development Planning in Peninsular Malaysia," 1979. *Mf., Univ. Microfilms.

Waits, Michael J. "A Silent Revolution: The Nature of Famine and the Changing Character of Food Production in Nigerian Hausaland," 1979. *Mf., Univ. Microfilms.

Master's:

Chon, Soohyun. "The Impact of a Growth Center on an Agricultural Hinterland: A Case Study of Taigu, Korea," 1979.

Clarke, Keith C. "Population Density Dynamics in Syracuse 1900 to 1970: A Trend Surface Approach," 1979.

Oppenheim, John E. "Spatial Analysis and Predictive Model of Polybrominated Biphenyl (PBB) Contamination in Michigan," 1979.

Santiago, Victor A. "Multinodality and the Distribution of Population Density in San Juan, Puerto Rico," 1979.

University of Minnesota

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1925 GRADUATE PROGRAM FOUNDED: 1930s

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 2 M.A., 5 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 26 M.A. 28 Ph.D.
NOT IN RESIDENCE: 5 M.A. 11 Ph.D.

CHAIRMAN: Dwight A. Brown

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor Dwight A. Brown, Chairman, Department of Geography, University of Minnesota, 414 Social Science Building, Minneapolis, Minnesota 55455
Telephone (612) 373-2661

PROGRAMS AND RESEARCH FACILITIES: The special character of the Geography Department at Minnesota has evolved over a considerable length of time. The most pervasive elements have been the strong historical orientation deriving from the era of Ralph Brown and the interest in cultural geography introduced by Jan O.M. Broek. As the department has grown and developed since the late 1940's, increasing attention has been devoted to the history and philosophy of geography, cartography and quantitative analysis as well as to problems of urban and regional development. More recently the specialty in physical geography has been reinforced. The faculty have a wide range of regional interests, and the department participates in all area or regional studies programs. Graduate students are encouraged to develop with their advisers a program which fits their individual talents and needs. Laboratory, cartography and lecture classrooms are directly connected with departmental facilities. Computer facilities and programming services are available through the Social Sciences Research Facilities Center nearby.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Minnesota is on the quarter system. Students entering graduate studies normally have a strong undergraduate major in geography and some preparation in a related field or fields. Half-time teaching assistantships in courses in the departmental curriculum and assistantships in cartography, bibliography, computer programming, planning, and in team research projects are available for the academic year. Assistantship stipends at present range from $5094 to $6372 for nine months, plus remission of nonresident tuition and fees. Students may be nominated for Graduate School Fellowships, which pay tuition and offer a stipend of $4000.

HUMAN RIGHTS STATEMENT: The Board of Regents has committed itself and the University of Minnesota to the policy that there shall be no discrimination on the basis of race, creed, color, sex, age, or national origin. In adhering to this policy, the University abides by the requirements of Titles VI and VII of the Civil Rights Act of 1964, Revised Order No. 4, Executive Orders 11246 and 11375, Sections 799A and 845 of the Public Health Service Act, and other federal regulations and pertinent acts of Congress.

It is also the policy of the University of Minnesota not to discriminate on the basis of sex in its educational programs, admissions, activities, or employment policies as required by Title IX of the Education Amendments of 1972.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, Minneapolis, Minnesota 55455, (612) 373-7969, or to the Director of the Office of Civil Rights, Department of Health, Education, and Welfare, Washington, D.C. 20201.

STAFF:

John S. Adams, Ph.D., Minnesota, 1966, Professor and Director of Hubert H. Humphrey Institute of Public Affairs—American cities, regional analysis

Russell B. Adams, Ph.D., Minnesota, 1969, Associate Professor—quantitative-economic, U.S.S.R.

Ward J. Barrett, Ph.D., UC, Berkeley, 1959, Professor—Middle America, Oceania, historical

John R. Borchert, Ph.D., Wisconsin, 1949, Professor—metropolitan and regional land use planning

Dwight A. Brown, Ph.D., Kansas, 1968, Associate Professor and Chairman—physical, cartography, paleogeography, water resources

Philip J. Gersmehl, Ph.D., Georgia, 1970, Associate Professor—physical, education, North America

John Fraser Hart, Ph.D., Northwestern, 1949, Professor—cultural, North America

Mei-Ling Hsu, Ph.D., Wisconsin, 1966, Professor—thematic mapping, East Asia, quantitative methods

Fred E. Lukermann, M.A., Minnesota, 1950, Professor and Dean, College of Liberal Arts—historical-geographical thought

E. Cotton Mather, Ph.D., Wisconsin, 1951, Professor—rural settlement of the Americas

Roger P. Miller, Ph.D., UC, Berkeley, 1979, Assistant Professor—urban, economic, historical

Philip W. Porter, Ph.D., London, 1957, Professor and Director, Office of International Programs—cartography, Africa

John G. Rice, Fil. lic., Uppsala, 1965, Associate Professor—historical, Europe, especially the Scandinavian states and Finland

Joseph E. Schwartzberg, Ph.D., Wisconsin, 1960, Professor—South Asia, Southeast Asia, political

Earl P. Scott, Ph.D., Michigan, 1974, Assistant Professor—cultural, economic, Africa

Eric S. Sheppard, Ph.D., Toronto, 1977, Assistant Professor—economic, geographical theory, quantitative spatial analysis

Richard H. Skaggs, Ph.D., Kansas, 1967, Associate Professor—climatology

Roderick H. Squires, Ph.D., Durham, 1970, Associate Professor—biogeography, paleogeography

Yi-Fu Tuan, Ph.D., UC, Berkeley, 1957, Professor—cultural

Connie H. Weil, Ph.D., Columbia, 1980, Assistant Professor—medical, Latin America

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Albert, Michael D. "Japanese American Communities in Chicago and the Twin Cities," 1980.* Mf., Univ. Microfilms.

Higgins, Bryan R. "Visions of People: A Look at the Psychological and Spiritual Aspects of Planning," 1980.* Mf., Univ. Microfilms.

Hufferd, James L. "Pioneering: Cultural Integration on the Canadian Prairie in the Pioneer Period," 1979.* Mf., Univ. Microfilms.

Lauria, Mickey. "Community Controlled Redevelopment: South Minneapolis," 1980.* Mf., Univ. Microfilms.

Simmons, Terry A. "But We Must Cultivate Our Garden: Twentieth Century Pioneering in Rural British Columbia," 1979.* Mf., Univ. Microfilms.

Master's:

Curry, Michael Robert. "Forms of Life: A Wittgensteinian View," 1980.*

Mississippi State University

DEPARTMENT OF GEOLOGY AND GEOGRAPHY

DATE FOUNDED: 1916 GRADUATE PROGRAM FOUNDED: 1925

DEGREES OFFERED: M.S., M.A.T., M.S.S.

GRANTED 8/1/79–6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 11 M.S.

HEAD: Troy J. Laswell

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Troy J. Laswell,
Head, Department of Geology and Geography, Mississippi State University, P.O.
Drawer GG, Mississippi State, Mississippi 39762
Telephone (601) 325-5926

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts in Teaching and the Master of Social Studies are non-thesis, interdisciplinary degrees. The Master of Science program requires a minimum of thirty semester hours credit, including six hours of thesis, and proficiency in one foreign language. In the Master of Science program the emphasis is to provide a strong background in systematic and regional geography with techniques and training for independent research. Limited specialization within the department is presently available (remote sensing, quantitative techniques, urban and regional planning, cartography, and some regional specialties). There are numerous opportunities for interdisciplinary studies within this program. Mississippi State University has many strong departments within the Colleges of Agriculture, Arts and Sciences, Business and Industry, Education, Engineering, Veterinary Medicine, and the Schools of Architecture and of Forest Resources. Campus and off-campus research facilities include Mitchell Library, a depository for government publications and a member of many library interchange networks, a large computing center, the Gulf Coast Research Laboratory at Ocean Springs, and the National Space Technology Laboratory at Bay St. Louis. The University is a member of several consortia, such as Gulf Universities Research Consortium, Mississippi-Alabama Sea Grant Consortium, and Oak Ridge Associated Universities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Minimum admission standards are a 2.5 grade point average for the last two years of undergraduate study, or a minimum of 800 on the aptitude tests of the Graduate Record Examination. Undergraduate programs need not have been in geography, but at least 18 undergraduate hours in geography are prerequisite to the M.S. program in geography. Several graduate assistantships are available. Reimbursement begins at $3600 for nine months, plus remission of out-of-state fees. Graduate assistants may carry a maximum of ten hours credit per semester. Some additional financial aid may be available from contractual research carried on by the department.

FULL-TIME STAFF:

William E. Doolittle, Ph.D., Oklahoma, 1979, Assistant Professor (Geography)—cultural, political, Latin America, Africa

Gary K. Higgs, Ph.D., Illinois, 1971, Assistant Professor (Geography)—cartography, cultural, economic, quantitative, remote sensing

Donald M. Keady, Ph.D., Texas A & M, 1970, Professor (Geology)—geomorphology, environmental, water resources

Troy J. Laswell, Ph.D., Missouri, 1953, Professor (Geology and Geography) and Head of Department—climatology, Gulf Coast studies, photo interpretation, physical

Thomas W. Lins, Ph.D., Kansas, 1969, Associate Professor (Geology)—environmental, oceanography

Merle W. Myers, Ph.D., Clark, 1948, Professor, Emeritus (Geography)—cartography, environmental, Europe, North America, physical, urban

Karl A. Riggs, Ph.D., 1956, Associate Professor (Geology)—economic mineral resources

Ernest E. Russell, Ph.D., Tennessee, 1965, Professor (Geology)—geomorphology, Gulf Coast studies, paleogeography, paleontology

Charles L. Wax, Ph.D., Louisiana State, 1977, Assistant Professor (Geography)—climatology, meteorology, environmental, conservation, North America

PART-TIME STAFF:

Ester Breland, Jr., M.S., Mississippi State, 1973, Acting Instructor (Geography)—cultural, conservation, world regional

John M. Kaye, Ph.D., Louisiana State, 1974, Assistant Professor (Geology)—earth sciences, paleogeography, vertebrate paleontology

ADJUNCT STAFF:

James I. Jones, Ph.D., Wisconsin, 1964, Adjunct Professor (Geology)—Director, Mississippi-Alabama Sea Grant Consortium

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Master's:

Clark, Michael S. "Planktonic Foraminifera of the Ripley Formation (Maestrichtian) Mississippi," 1980.

University of Missouri–Columbia

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1950 GRADUATE PROGRAM FOUNDED: 1950

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 9

GRADUATE STUDENTS IN RESIDENCE: 22
NOT IN RESIDENCE: 1

CHAIRPERSON: Robert F. Austin

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director of Graduate Studies, Department of Geography, University of Missouri-Columbia, Columbia, Missouri 65211
Telephone (314) 882-8370

PROGRAMS AND RESEARCH FACILITIES: The department offers the M.A. degree on alternative programs, with or without a thesis. Thirty-two hours of course work, which may include varying amounts of individual reading and research, are required. The programs are tailored to fit the individual needs and interests of graduate students, making liberal use of collateral fields where indicated. Strong collateral work is available in atmospheric science, geology, anthropology, economics, history, planning, and various other fields. Programs focussed on Asia, physical geography and environmental studies, North America, economic and planning-related geography are common. The University of Missouri library holdings in books, journals, and documentary materials in geography and related fields are very extensive. In addition, the department itself has a large collection of books, journals, bibliographical and other research aids and maps. Computer facilities, including new graphics equipment, are readily available, and their use is encouraged. A recently acquired Bausch and Lomb stereozoom transfer scope, located in the cartography laboratory, is available for teaching and research. Close contact between graduate students and staff is emphasized. Graduates are prepared for teaching, for certain other employment, such as planning, and for Ph.D. work.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Admission: An applicant with an undergraduate G.P.A. of at least 3.0, on a 4.0 system, may be admitted on the basis of this record alone. Lower G.P.A.'s require strong support in the form of letters of recommendation and good scores on the Graduate Record Examination. Applicants must take the Verbal and Quantitative parts of this examination and may also submit a score in geography or another subject if they so desire. Eight to twelve teaching assistantships of approximately $4425 for nine months and a few grant-related research assistantships are available on a competitive basis.

STAFF:

Robert F. Austin, Ph.D., Michigan, 1977, Assistant Professor and Chairperson—Southeast Asia, population, cultural (on leave, 1980-81)

Wayne L. Decker, Ph.D., Iowa State, 1955, Professor of Atmospheric Science—climatology

J. Trenton Kostbade, Ph.D., Michigan, 1957, Associate Professor—geographic education, political, Anglo-America, Europe

Gail S. Ludwig, D.A., Northern Colorado, 1977, Assistant Professor (Extension)—geographic education, outdoor environmental education, remote sensing

William A. Noble, Ph.D., Louisiana State, 1968, Associate Professor—cultural, architectural, South Asia

Walter A. Schroeder, Ph.D. candidate, Chicago, Instructor, Acting Chairman, 1980-81—landforms, field geography, Latin America, Missouri

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Jesse H. Wheeler, Jr., Ph.D., Chicago, 1950, Professor—United States, Britain, geographic bibliography, college teaching of world regional geography, historical

Ann L. Wright, M.A., Missouri, 1980, Instructor—world regional geography, geographic education

One additional position in cartography and remote sensing will be filled during the coming year.

VISITING STAFF, 1980-81:

Alan Jenkins, Senior Lecturer, Oxford Polytechnic—China, political, human, field geography

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Burson, Thomas Ryan. "The Geography of Interstate Migration, 1960-1977." 1980.

University of Montana

DEPARTMENT OF GEOGRAPHY

DEGREES OFFERED: M.A. in Geography, M.S. in Rural, Town, and Regional Planning

GRANTED 7/1/79-6/20/80: 3

GRADUATE STUDENTS IN RESIDENCE: 3 M.A., 16 M.S.
NOT IN RESIDENCE: 4 M.A., 8 M.S.

CHAIRMAN: Evan Denney

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Department of Geography, University of Montana, Missoula, Montana 59812
Telephone (406) 243-4302

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography at Montana is a 7-person department with a small graduate group and an atmosphere in which the student can receive a good deal of individual attention. The mountain location of Missoula offers many research opportunities as well as amenities. Encouragement is given to involvement in research on local, Pacific Northwest, or Rocky Mountain problems.

Programs: The M.A. in geography requires a minimum of 45 graduate credits, a reading knowledge of a foreign language or a substantial competency in quantitative analysis, and a thesis. Thesis topics will be considered in any of the areas of specialization, listed below, of the faculty and faculty affiliates. The M.S. in Rural, Town, and Regional Planning is intended to prepare students for positions in agencies which provide planning services for sparsely populated areas. It involves 70 graduate credits, a six-month internship, and a professional paper. The program relies on course offerings and expertise not only in geography but also in forestry, geology, sociology, economics, political science, and business administration.

Research Facilities: Physical facilities and library holdings are modest but generally adequate for the areas of geography in which theses will be accepted and for the planning program. Facilities may not be adequate for highly specialized research.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:
Academic Plan: Quarter system. Students may enter any quarter.

Admission Requirements: Applications are examined for evidence of potential for scholarly achievement. A 3.0 GPA (on 4.0 systems) is required for admission on regular status. All applicants must supply Graduate Record Examination scores (verbal and quantitative), and applicants from non-English speaking countries must have taken the Test of English as a Foreign Language. Applications are welcome from prospective students whose prior training was not in geography or planning. Requirements to make up undergraduate deficiencies are kept to a minimum.

Financial Aid: The Department has four $2800 Graduate Teaching Assistantships which carry remission of most fees. The successful candidates are selected from among those whose applications for admission to the Graduate School are complete on April 1. Opportunities for employment on faculty research or consulting projects are occasionally available.

FACULTY:

Harold W. Bockemuehl, Ph.D., Massey, 1974, Associate Professor— cartography, map and air photo interpretation, urban, Australia-New Zealand-S.W. Pacific

John M. Crowley, Ph.D., Minnesota, 1964, Professor—mountain geography, ecosystem mapping and land-capability analysis, North American West, Montana

Evan Denney, Ph.D., Washington, 1970, Professor—resources, land subdivision, land use planning, economic, Pacific Northwest

John J. Donahue, Ph.D., Syracuse. 1971, Associate Professor—landforms, air photo interpretation, terrain evaluation, morphometric analysis

Chris Field, Ph.D., UCLA, 1969, Associate Professor—cultural, environmental change, irrigation, Hispanic America

Darshan S. Kang, Ph.D., Nebraska-Lincoln, 1975, Assistant Professor—water resources, climatology, meteorology, quantitative methods, South Asia

Paul B. Wilson, Ph.D., Nebraska-Lincoln, 1972, Associate Professor—cartography, map and air photo interpretation, historical, United States

FACULTY AFFILIATES:

John H. Crowley, B.A. Maine, 1968—planning

Christopher J. Daly, Ph.D., Michigan, 1979

John Gilliam, M.A., Montana, 1972

Robert C. Lucas, Ph.D., Minnesota, 1972, U.S. Forest Service—geography of recreation, resource management and conservation, cultural

George H. Stankey, Ph.D., Michigan State, 1970, U.S. Forest Service—land use and recreation planning, social

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William A. Walton, M.P.A., SUNY Albany, 1969—planning
A.L. Zimmerman, B.S., Montana State, 1949, U.S. National Weather Service (retired)—climatology, meteorology, hydrology

TITLES OF THESES COMPLETED 7/1/79–6/30/80:
Landon, Patrick. "Empty Slopes and Busy Corridors: A Geography of Mineral County, Montana," 1980.
Smith, T.S.T. "Increased Patron Mobility as a Cause in the Decline of Thermal Springs in Western Montana," 1979.

Murray State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1930 GRADUATE PROGRAM FOUNDED: 1969

DEGREES OFFERED: M.A., M.S., M.A. in Education (emphasis in Geography), M.A.C.T., S.C.T.

GRANTED 7/1/79–6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 2
NOT IN RESIDENCE: 0

CHAIRMAN: James P. Matthai

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. James P. Matthai, Chairman, Department of Geography, Murray State University, Murray, Kentucky 42071
Telephone (502) 762-2591

PROGRAMS AND RESEARCH FACILITIES: The Geography Department offers both the M.A. and M.S. degrees with the thesis (30 hours) or non-thesis (33 hours) option. A third offering is an emphasis in Urban and Regional Planning requiring a nine-hour internship. An oral exam on the thesis material is required of the thesis student and a written comprehensive for the non-thesis student.

The department also participates in three additional graduate programs. They are the M.A. in Education with 18 hours of geography, the Specialist in College Teaching with 30 hours of geography, and the Master of Arts in College Teaching (junior college) requiring also 30 hours in geography. The department has a well-equipped cartography laboratory, several calculators, remote sensing laboratory, a departmental library/reading room, and a map library. The Department now operates the Mid-America Remote Sensing Center. A major feature of the center is a computing and display system which will process Landsat Digital Data.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The university operates on the semester system and has two five-week summer sessions. To be admitted to graduate school, an undergraduate major in Geography is desirable but not necessary for admittance to the program. However, beginning graduate students are expected to have an adequate knowledge of the field. Students should have completed one undergraduate course in cartography. If this undergraduate requirement has not been met, it is possible to take cartography for undergraduate credit while enrolled in the graduate program. The applicant should have an overall undergraduate grade point average of 2.5 (based on 4.0) or above with a grade point average of 3.0 in geography. Students who do not meet these requirements may be admitted to the program with the approval of the geography faculty.

STAFF:

David H. Irwin, M.S., Tennessee, 1949, Associate Professor—climatology, history of geography, Southeast Asia

Thomas C. Kind, Ph.D., Indiana State, 1976, Assistant Professor—geomorphology, air photo interpretation, remote sensing, U.S.

James P. Matthai, Ed.D., Teachers College, Columbia, 1962, Chairman and Professor—geomorphology, conservation, Middle-East

Neil V. Weber, Ph.D., Indiana State, 1972, Associate Professor and Director, MARC—geography, energy management

University of Nebraska - Lincoln

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1907 GRADUATE PROGRAM FOUNDED: 1907

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 3 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 17 M.A. 6 Ph.D.
NOT IN RESIDENCE: 4 M.A. 8 Ph.D.

CHAIRPERSON: Professor Brian W. Blouet
ACTING CHAIRPERSON: Merlin P. Lawson (1980-81)

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman of the Graduate Committee, Department of Geography, University of Nebraska, Lincoln, Nebraska 68588
Telephone (402) 472-2865

PROGRAMS AND RESEARCH FACILITIES: There is substantial flexibility in designing programs, but course work and staff interests tend to group into several distinct areas.

M.A. LEVEL: (1) *Climatology and Meteorology,* with a focus on climatic change, dendroclimatology, air-sea interaction, severe storms, air pollution, and snow and ice studies. (2) *Historical-cultural geography,* with work tending to focus on the Great Plains. (3) *Spatial analysis and theory,* together with separate emphases on diffusion studies and issues concerned with environment and behavior. (4) *Industrial location* with an applied focus, supplemented by courses in regional economics. (5) *Cartography,* including thematic mapping, computer cartography, photogrammetry, and the history of cartography.

Ph.D. LEVEL: (1) *Climatology and Meteorology.* With good facilities and seven staff in this area, several programs of specialization are available. Faculty interests center on long-range forecasting, severe storms, climatic change, and computer graphics. (2) *Historical-cultural geography.* Continuing a long tradition of work in this area, several staff offer work. Emphasis may include early settlement (especially on Great Plains), land use, history of cartography, perception of past environments, and the interaction between the Anglo frontier and native Americans. (3) *Environmental and social issues,* with a focus on the importance of space in social organization, rural and urban problems, and experiences, perceptions, and thoughts about one's environmental setting.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. For admission to the M.A. program, a person should have a bachelor's degree in geography or some other appropriate field. GRE scores are strongly recommended, and the verbal and quantitative scores should at the minimum total 950. The M.A. degree requires 24 hours of course work, plus a thesis (or 36 hours without a thesis) and a written examination. For admission to the Ph.D. program, a person should have an M.A. in geography (with thesis) or its equivalent. GRE scores are required, and the total of verbal and quantitative scores should exceed 1100. Some 36 hours of course work is necessary, plus a dissertation, written and oral comprehensives, and one research tool.

Graduate teaching assistantships ($4000–4400) carry with them remission of non-resident tuition fees and free summer tuition. Duties are 14 hours per week, most commonly involving laboratory teaching. M.A. students are eligible for two years' support, and Ph.D. students up to three years'. University fellowships are available to persons with outstanding qualifications. Also available are research assistantships and part-time teaching positions (freshman-level courses). Inquire early if possible; completed applications are due March 1.

STAFF:

Douglas M. Amedeo, Ph.D., Iowa, 1967, Associate Professor—spatial theory, quantitative analysis, environment and behavior, diffusion

Robert C. Balling, Ph.D., Oklahoma, 1979, Assistant Professor—climatic fluctuation, applied climatology, computer graphics

Brian W. Blouet, Ph.D., Hull, 1964, Professor and Chairman and Director of Center for Great Plains Studies—historical settlement, Great Plains, Mediterranean (on leave 1980–81)

Kenneth F. Dewey, Ph.D., Toronto, 1973, Assistant Professor—applied climatology, meteorology, quantitative methods

Arthur V. Douglas, Ph.D., Arizona, 1976, Assistant Professor—meteorology, climatology, air-sea interaction, dendrochronology

Leslie Hewes, Ph.D., U.C., Berkeley, 1940, Professor Emeritus—historical and cultural geography, Great Plains

Jay S. Hobgood, Ph.D., Ohio State, 1979, Assistant Professor—dynamic meteorology, tropical weather systems, computer graphics

Bruce E. Kopplin, A.B.D., Georgia, Instructor—applied climatology, meteorology

Merlin P. Lawson, Ph.D., Clark, 1973, Associate Professor—Pleistocene and historic environments, climatic change, computer cartography, dendroclimatology

Richard E. Lonsdale, Ph.D., Syracuse, 1960, Professor—industrial location, small towns, Australia, Soviet Union

C. Barron McIntosh, Ph.D., Nebraska, 1955, Professor—applied climatology, Great Plains settlement

Karen S. Pearson, Ph.D., Wisconsin, 1978, Assistant Professor—map design and production, history of cartography

Dean S. Rugg, Ph.D., Maryland, 1962, Professor—urban, history and philosophy of geography, Eastern and Western Europe

Robert H. Stoddard, Ph.D., Iowa, 1966, Associate Professor—field techniques, social, South Asia

Michael M. Swann, Ph.D., Syracuse, 1980, Assistant Professor—historical and cultural geography, historical demography, Great Plains

David J. Wishart, Ph.D., Nebraska, 1971, Associate Professor—historical, cultural, perception of past environments, Great Plains

AFFILIATED STAFF: Other persons teaching geography courses and/or working closely with geography students:

Larry J. Edwards, Ph.D., (geological engineering), Arizona—photogrammetry

Frederick C. Luebke, Ph.D., (history), Nebraska, Professor—Great Plains, ethnic group settlement

Gary E. Moulton, Ph.D., (history), Oklahoma State—Center for Great Plains Studies, editor of Lewis and Clark Expedition journals

Mary Louise Quinn, Ph.D., (geography), U.C., Berkeley, Associate Professor—water resources

Donald C. Rundquist, Ph.D., (geography), Nebraska, Assistant Professor—remote sensing

John F. Shroder, Jr., Ph.D., (geology), Utah, Associate Professor—tropical and periglacial geomorphology

William J. Wayne, Ph.D., (geology), Indiana, Professor—geomorphology, urban geology, Quaternary studies

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Giardino, John R. "Rock Glacier Mechanics and Chronologies: Mount Mestas, Colorado," 1979. *Mf., Univ. Microfilms.

Master's:

Baker, Margaret D. "The Locational Dimension of Nonmetropolitan Unionization," 1980.*

Englehart, Phillip J. "Predicting Winter Precipitation Regimes in the Southern United States: A Statistical Inquiry," 1980.*

Veys, Cynthia Louise. "Improvements in Drought Forecasting: Would They Make a Difference." 1979.

University of Nebraska at Omaha

DEPARTMENT OF GEOGRAPHY-GEOLOGY

DATE FOUNDED: 1958 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/79-6/30/80: 6

GRADUATE STUDENTS IN RESIDENCE: 35

CHAIRMAN: Philip E. Vogel

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Philip E. Vogel,
Chairman, Department of Geography-Geology, University of Nebraska at Omaha,
Omaha, Nebraska 68182
Telephone (402) 554-2662

PROGRAMS AND RESEARCH FACILITIES: The department's graduate program is directed toward a knowledge of and research in urban geography, remote sensing, and environmental studies.

Our library currently houses more than 200 journals and serials of value to geographers, the complete AGS catalog and map reference catalog. It is linked to the University of Nebraska-Lincoln Library by TWX. Our quantitative and cartographic interests are supported by a University IBM 360 and Kronos CDC 6400. Graphics capabilities include Tektronics terminals and on-line Gould electronic plotting. The remote sensing and cartographic laboratories, both supported by a complete photo-processing facility, are especially well-equipped.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The graduate program is based on a philosophy of breadth rather than narrow specialization. This breadth is designed to develop professional competence appropriate to careers in planning, industry, government, and teaching, as well as preparation for advanced doctoral work. Although emphasis is on breadth, opportunities for some specialization do exist particularly in geomorphology, urban planning, economic, cultural, regional geography, and remote sensing.

The Master of Arts degree is taken by those preparing for careers in research and scholarly work or in college or university teaching. The option requires a minimum of 24 semester hours in geography courses numbered 800M to 800V and 900, and 1 to 6 hours of thesis work for a combined total of 30 semester hours. *The Master of Science* degree has two options. Option I provides for preparing a thesis as provided under the Master of Arts degree. Option II may be chosen upon the advice and with the approval of the major advisor. This option requires a minimum of 36 semester hours in geography courses numbered 800M or 800V and 900, or selected cognate courses in other departments. No thesis is required for this option. Students who have taken this degree and later elect to continue in graduate work for the Ph.D. will not be encouraged by the department to continue unless evidence of ability to carry on independent research is presented.

Admission Requirements: To enter either the M.A. or M.S. degree program in geography the applicant must present a minimum of 15 undergraduate semester hours in geography including: physical, human, and cartography, and should have at least a B (3 point based on a possible 4 point scale) average in all undergraduate work in geography.

Financial Aid: On the basis of undergraduate records and recommendations a number of graduate assistantships are available allowing the student the experience of teaching in laboratories and classroom. The assistantships currently provide a stipend of about $3590 per academic year. Six hours of tuition and the out-of-state portion of any remaining tuition are waived.

STAFF:

Nicholas Bariss, Ph.D., Clark, 1967, Professor—geomorphology with emphasis on loess topography, climatology, Europe

Charles R. Gildersleeve, Ph.D., Nebraska, 1978, Associate Professor—economic, urban, Latin America, with emphasis on location theory and urban ethnicity

William D. Gosnold, Ph.D., Southern Methodist, 1976, Assistant Professor—geophysics, geothermal energy, heat flow

Jeffrey S. Peake, Ph.D., Louisiana State, 1977, Assistant Professor—physical, climatology, resource conservation, remote sensing

Harold J. Retallick, Ph.D., Clark, 1950, Professor—urban geography, environmental studies

Donald C. Rundquist, Ph.D., Nebraska-Lincoln, 1977, Assistant Professor—urban, remote sensing, cartography

John F. Shroder, Jr., Ph.D., Utah, 1967, Professor—geology, tropical and periglacial geomorphology, East Africa, Afghanistan

Philip E. Vogel, Ph.D., Nebraska-Lincoln, 1960, Professor and Chairman—historical, agricultural, United States, history and philosophy of geography

Joseph S. Wood, Ph.D., Pennsylvania State, 1978, Assistant Professor—human geography, cultural landscapes of North America, historic preservation

University of New Mexico

GEOGRAPHY DEPARTMENT

GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 1

CHAIRMAN: Richard E. Murphy

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor Rodman E. Snead, Geography Department, University of New Mexico, Albuquerque, New Mexico 87131
Telephone (505) 277-2253

PROGRAMS AND RESEARCH FACILITIES: The Department offers a considerable range of courses and thesis direction in systematic and regional geography. The fields with greatest depth are: climatology, cartography, cultural geography, urban geography, geomorphology, remote sensing, Southwestern U.S., Latin America, Europe, Africa, and Southern Asia. The Department is an active participant in the University's strong program of Inter-American Affairs. Library holdings are good, particularly with respect to Arid Lands and Latin American materials.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on the semester system.

Each application is reviewed individually, but in general an overall undergraduate average of near B and a full B average in undergraduate work in geography are necessary for admission to the program.

Thesis and non-thesis plans are offered. Candidates for the degree must pass a reading examination in a foreign language, or complete successfully two semesters of quantitative methods. Each candidate must pass an oral comprehensive examination.

Two teaching assistantships and one graduate assistantship are available. The stipend is $4300. Application for other types of financial aid may be made to the Graduate Office.

STAFF:

Elinore M. Barrett, Ph.D., UC, Berkeley, 1970, Professor—cultural-historical, Latin America

Iven Bennett, Ph.D., Boston, 1962, Professor—climatology, United States and Canada

Stanley A. Morain, Ph.D., Kansas, 1970, Associate Professor—biogeography, geography of soils, remote sensing

Richard E. Murphy, Ph.D., Clark, 1957, Professor and Chairman—cultural, political, Europe

Alastair Shedden, A.B.D., UC, Berkeley, Assistant Professor—economic resources, cartography, field methods

Rodman E. Snead, Ph.D., Louisiana State, 1963, Professor—geomorphology, map reading and air photo interpretation, Middle East, South Asia

Jerry L. Williams, Ph.D., Oregon, 1977, Assistant Professor—quantitative methods, urban, land use planning, Africa

New appointment to be made, Fall 1980.

University of North Carolina, Chapel Hill

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1936 GRADUATE PROGRAM FOUNDED: 1936

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 2 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 18 M.A. 8 Ph.D.
NOT IN RESIDENCE: 7 M.A. 7 Ph.D.

CHAIRMAN: Richard J. Kopec

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Richard J. Kopec, Chairman, Department of Geography, UNC-Chapel Hill, 203 Saunders Hall 043-A, Chapel Hill, North Carolina 27514
Telephone (919) 933-8901

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers both M.A. and Ph.D. degrees. Intensive training is offered in urban-economic, population-medical, physical environment and cartographic fields. Emphasis is placed on analysis of problems which have an applied aspect and consequently have implications for policy development. Programs are tailored to the student's interests and normally include courses in other departments such as economics, city and regional planning, sociology, political science, epidemiology, or environmental science and engineering.

Students have access to the facilities of the Institute for Research in Social Science, Institute of Latin American Studies, Institute of Government, Carolina Population Center, Institute of Statistics and the Water Resources Research Institute. Cooperative programs among the University of North Carolina, Duke University and North Carolina State University permit use of their combined library holdings, courses, and facilities. IBM System 360/75 and 370/165 computers are available through the Computation Center on campus and are linked to the Department by Tektronix, TSR-80, and TelRay remote terminals. Cartographic facilities include a computer graphics room equipped with a Bendix Datagrid Digitizer interfaced to a IBM 029 cardpunch machine and to a Tektronix CRT-Processor, a Plotter, and a Hard-copier. The nearby Research Triangle Park provides a unique complement of private and governmental research facilities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates under the semester system. Several University fellowships are available for first-year students with superior academic records.

Departmental graduate assistantships are awarded on a competitive basis as are research assistantships provided by the various centers and institutes. These assistantships usually carry in-state tuition. Departmental assistantships normally require the recipient to teach discussion sections of introductory courses. Part-time teaching of extension courses and in nearby colleges also may be available to qualified applicants. Presently, 23 graduate students are financially supported through the Geography Department.

Forms for admission to the Graduate School and for financial assistance are obtained directly from the Graduate School Admissions Office, Steele Building, University of North Carolina, Chapel Hill, NC 27514.

Two copies of all undergraduate and graduate transcripts and scores from the general aptitude section of the Graduate Record Examination are a part of the application. Prospective students should include a brief one- to two-page statement explaining their purposes and goals in undertaking graduate study in geography.

February 1st is the deadline for applications and notification of fellowships awards is sent out shortly thereafter. Applications for admission without aid will be considered until late spring.

STAFF:

David G. Basile, Ph.D., Columbia, 1964, Professor Emeritus—economic resources, Latin America

Stephen S. Birdsall, Ph.D., Michigan State, 1968, Professor—social, transportation, North America

Clyde E. Browning, Ph.D., Washington, 1958, Professor—urban, South, Quaternary, economic

John D. Eyre, Ph.D., Michigan, 1951, Professor—political, Asia

John W. Florin, Ph.D., Penn State, 1971, Associate Professor—population, medical, historical Anglo-America

Arthur J. Hawley, Ph.D., Michigan, 1968, Assistant Professor—food resources, water resources, remote sensing, field methods

Richard J. Kopec, Ph.D., Clark, 1965, Professor and Chairman—climatology, cartography

Melinda S. Meade, Ph.D., Hawaii, 1974, Associate Professor—medical, population, Southeast Asia

G. Joseph Meneley, Ph.D., Iowa, 1980, Assistant Professor—medical, computer cartography, location-allocation modelling

Barry M. Moriarty, Ph.D., Michigan State, 1970, Professor—urban, location theory, microspatial behavior

Peter J. Robinson, Ph.D., McMaster, 1972, Associate Professor—meteorology, climatology

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Galloway, Gerald. "Ex-Post Evaluation of Regional Water Resources Development: The Case of the Yazoo-Mississippi Delta," 1979. Mf., Univ. Microfilms.

Smith, Robert Wheeler. "A Geographical Analysis of the North Sea Continental Shelf Cases," 1979.* Mf., Univ. Microfilms.

Master's:

Hill, Dawn. "The Patterns of Migration Flows to North Carolina 1955–60 and 1965–70," 1979.* Mf., Univ. Microfilms.

Smith, Sue R. "A Geographic Analysis of Nursing Home Utilization in North Carolina," 1979.* Mf., Univ. Microfilms.

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University of North Carolina, Charlotte

DEPARTMENT OF GEOGRAPHY AND EARTH SCIENCES

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1973

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 7

GRADUATE STUDENTS IN RESIDENCE: 13
NOT IN RESIDENCE: 7

CHAIRMAN: Alfred W. Stuart

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Advisory Committee, Department of Geography and Earth Sciences, University of North Carolina at Charlotte, UNCC Station, Charlotte, North Carolina 28223
Telephone (704) 597-2293

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography and Earth Sciences offers an M.A. degree that is strongly oriented to the application of geographic concepts and methods to the contemporary world. Applications of cartography, computerized graphics, quantitative methods and remote sensing are emphasized. Graduates of the program are prepared to work as professionals in areas such as urban and regional planning research, locational analysis, community college teaching, marketing research, cartography, and environmental problems. Most students are placed with a local company or agency, in a directed internship in lieu of the traditional thesis research. Each internship student completes a research project that is the basis for a final thesis-type report.

Student programs are individually tailored, and up to one-third of courses can be taken in related fields.

The Department is housed in the new McEniry Earth-Life Science Building.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates under the semester system. Teaching assistantships carry stipends of $3500 and remission of the nonresident portion of tuition is usually available. Part-time teaching is sometimes available as is employment in the departmental cartographic lab. Students on internships receive a stipend that is usually more than that paid to teaching assistants. Application forms should be obtained from the Director of Graduate Studies, University of North Carolina at Charlotte, UNCC Station, Charlotte, North Carolina 28223, or from the Department. An official transcript of all previous academic work is required plus scores from either (1) the general aptitude section of the Graduate Record Examination, or (2) the Miller Analogies Test and the Doppelt Mathematical Reasoning Examination. An undergraduate geography major is not required, but those students who are deficient in the basic concepts and methods of geography will be required to take prerequisite coursework.

Applications for teaching assistantships should be received by March 1. Awards are announced by about April 1. Applications for admission without aid are considered until one month prior to the beginning of any semester. Financial aid is sometimes available beginning in the Spring semester as well.

FULL-TIME AND PART-TIME STAFF:

James W. Clay, Ph.D., UNC Chapel Hill, 1969, Professor and Director, Urban Institute—resources, Latin America, environment, cartography

Joseph P. Frizado, Ph.D., Northwestern, 1980, Lecturer—geochemistry, geohydrology

Owen J. Furuseth, AICP, Ph.D., Oregon State, 1978, Assistant Professor—land use planning, environmental impact analysis, man-land studies (on leave 1980–81)

Gerald L. Ingalls, Ph.D., Michigan State, 1973, Associate Professor—political, urban, crime

Sallie M. Ives, Ph.D., Illinois, 1977, Assistant Professor—urban, social cognition, social impact analysis

Robert E. Lemmon, Ph.D., UNC Chapel Hill, 1973, Assistant Professor—petrology, geochemistry, structural geology

J. Dennis Lord, Ph.D., Georgia, 1970, Associate Professor—urban-economic, marketing, quantitative

David L. Martin, Ph.D., South Carolina, 1976, Assistant Professor—sedimentology, stratigraphy

Walter E. Martin, Ph.D. candidate, Tennessee, Lecturer—cultural, historical physical

Nelson R. Nunnally, Ph.D., Illinois, 1965, Professor—physical, quantitative methods, remote sensing

Lola M. Olsen, Ph.D. candidate, UNC Chapel Hill, Lecturer—physical, environmental

Douglas M. Orr, Jr., Ph.D., UNC Chapel Hill, 1968, Professor and Vice Chancellor for Research and Public Service—political, cultural, Europe

Gerald F. Pyle, Ph.D., Chicago, 1970, Professor—urban, medical

Norman W. Schul, Ph.D., Syracuse, 1962, Professor and Special Assistant to the Chancellor—Asia, economic

Jefferson L. Simpson, M.Ed., UNC Charlotte, 1974, Lecturer—cartography

Alfred W. Stuart, Ph.D., Ohio State, 1966, Professor and Chairman—urban, manufacturing, polar regions

Taz Tally, Ph.D. candidate, UC, Santa Barbara, Assistant Professor—geomorphology, environmental geology

Wayne A. Walcott, Ph.D., Illinois, 1974, Associate Professor —transportation, industrial, location theory

Additional faculty will be added for 1980–81.

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Houston, Sharon Lynn. "A Study of the Supermarket Sales Potential of a Small Town," 1980.

Kesler, Richard. "The Socioeconomic Impacts of Local Growth Management Programs" (joint degree—Geography and Urban Administration), 1980.

Mesimer, Douglas B. "Trade Area Impacts of a New Retail Facility," 1980.

Nash, David. "Policy Evolution for the Uwharrie National Forest," 1980.

Sigmon, Joan. "Greenway Sites Selection and Evaluation in Mecklenburg County," 1980.

Stammerjohn, Bettie. "Conversion of Farmland to Urban Uses in Mecklenburg County," 1980.

Throneburg, Sylvia. "Mineral Resource File for the U.S. South," 1980.

University of North Dakota

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1884 GRADUATE PROGRAM FOUNDED: 1940

DEGREES OFFERED: M.A., M.S., M.Ed.

GRANTED 7/1/79–6/30/80: 4

GRADUATE STUDENTS IN RESIDENCE: 16
NOT IN RESIDENCE: 4

CHAIRMAN: William A. Dando

FOR CATALOG AND FURTHER INFORMATION WRITE TO: William A. Dando, Department of Geography, University of North Dakota, Grand Forks, North Dakota 58202
Telephone (701) 777-4246

PROGRAMS AND RESEARCH FACILITIES: Graduate programs available include the Master of Arts and Master of Science degrees (thesis required) and the Master of Education degree (non-thesis). Designed to prepare graduate students for doctoral study or for a professional level career in government, industry, or education, the geography curriculum is oriented to professional competence in the discipline. The graduate student in geography is expected to develop both a systematic and a regional interest, basic research tools and techniques, and a knowledge of geographic theory and concepts.

The Department of Geography operates the U.S. National Oceanographic and Atmospheric Service Weather Station at Grand Forks complete with evapotranspiration and meteorological instrumentation including air quality surveillance monitors. The Department maintains an extensive collection of climatic data for the Northern Plains region and is a depository for the Army Map Service. The departmental library contains a large topographic and wall map collection as well as selected books and periodicals. In addition to well-equipped cartographic, photographic and statistical facilities, the Department houses the University of North Dakota Institute for Remote Sensing.

Research reflecting the interests of individual faculty members includes systematic and topical aspects of geography. Technique interests include cartog-

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raphy, computer graphics, remote sensing, quantitative applications and field techniques. Regional interests extend over much of the world although completed master's theses reflect an emphasis on the Northern Great Plains region.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The graduate program in geography at the University of North Dakota has been developed with the presumption that entering students normally would have successfully completed an undergraduate major and hold a Bachelor's degree in geography from a recognized institution. However, outstanding applicants are evaluated on an individual basis and those with limited backgrounds in geography but a distinguished record in another discipline may be accepted on a provisional basis with the understanding that deficiencies would be remedied early in the graduate program. Admission to approved status for graduate work in geography requires a B average (3.00 based on A = 4.00) in a minimum undergraduate preparation of twenty-four semester credits (at least twelve credits in geography and twelve credits from those cognate fields directly related to geography), or demonstrated proficiency in geography which would be assurance of success in graduate study.

STAFF:

Ted J. Alsop, Ph.D., Oregon State, 1979, Assistant Professor—natural environments, climatology, remote sensing, Latin America

Ralph C. Brown, Ph.D., Syracuse, 1964, Professor—economic, rural, population, political, map reading, North Polar Region, Africa, North America

Kang-tsung Chang, Ph.D., Clark, 1971, Associate Professor—cartography, spatial analysis, computer applications

William A. Dando, Ph.D., Minnesota, 1969, Professor and Chairman—agriculture, field methods, physical, meteorology, climatology, remote sensing, U.S.S.R., Eastern Europe

Floyd C. Hickok, A.B.D., U.C., Davis, 1978, Research Fellow and Staff Cartographer—cartography, computer graphics, agriculture, North America

Gary E. Johnson, Ph.D., Indiana State, 1974, EROS Data Center (faculty associate)—agriculture, land use, remote sensing, cartography, quantitative methods, economic, North America

Roland D. Mower, Ph.D., Kansas, 1971, Associate Professor—agriculture, land use, remote sensing, conservation, Latin America, cultural, physical, meteorology, climatology

Douglas C. Munski, Ph.D., Illinois, 1978, Assistant Professor—historical, geographic education, North America, transportation

Bernt L. Wills, Ph.D., Northwestern, 1953, Professor—Regional Geography: North Dakota, North America, Europe, Australia and New Zealand; teaching methods

John W. Wyckoff, Ph.D., Utah, 1980, Assistant Professor—remote sensing, biogeography, land use, air photo interpretation, field methods, environmental impact analysis

TITLES OF THESES COMPLETED 7/1/79–6/30/80:
Master's:

DeMers, Michael N. "Ecological Factors Affecting the Location and Spatial Patterns of the Western Harvester Ant (*Pogonomyrmex occidentalis*) in North Dakota," 1980.

Jobbins, Susan L. "The Geography of Racketball in Canada," 1980.

Rott, Gerald M. "Reclamation of Sand and Gravel Pits on the Glaciated Plains: Dickey and LaMoure Counties, North Dakota," 1980.

Troseth, Christopher. "A Study of the Growth and Decline of North Dakota Towns, 1920–1970," 1980.

North Texas State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1920 GRADUATE PROGRAM FOUNDED: 1978

DEGREES OFFERED: M.S., M.P.A. (Jointly with Department of Political Science)

GRANTED 7/1/79–6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 10

CHAIRMAN: Terry G. Jordan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: John L. Bean, Jr., Graduate Advisor, Department of Geography, North Texas State University, Denton, Texas 76203
Telephone (817) 788-2091 or 788-2562

PROGRAMS AND RESEARCH FACILITIES: Two programs are offered: (1) *Master of Science in Interdisciplinary Studies: Regional Science and Planning*—The Master of Science degree offered through the Department of Geography also draws upon courses in economics, sociology, real estate, and political science. The program meets the selective needs of professional planners in both the public and private sectors, in particular spatial planning and development at the regional and local level, with emphasis on urban and economic patterns. The program provides a solid foundation in spatial theory and practical-technical skills, including computer applications and mapping and quantitative methods. An internship is optional in the 36-hour program. (2) *Master of Public Administration: Urban and Regional Planning*—The Departments of Geography and Political Science jointly offer a graduate track in Urban and Regional Planning, leading to the degree of Master of Public Administration. This program prepares planners to function effectively within a governmental system. Focus is on spatial analysis in the planning process. The 36-hour program includes an internship, plus 15 hours each of courses and seminars in geography and political science.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. *Admission:* Applicants must submit scores on the Graduate Record Examination. No specific number of undergraduate hours in geography is required for admission to the M.S. program, but remedial undergraduate courses may be necessary in individual cases. Admission to the M.P.A. program requires completion of at least 6 undergraduate hours in geography and 12 in political science. *Financial Assistance:* For full-time on-campus students, teaching assistantships are available.

STAFF:

John L. Bean, Ph.D., Pittsburgh, 1967, Associate Professor—computer graphics, urban regional science

Stephen A. Hall, Ph.D., Michigan, 1975, Assistant Professor—environmental planning

William M. Holmes, Ph.D., Texas, 1975, Assistant Professor—cartography, rural land use

Terry G. Jordan, Ph.D., Wisconsin, 1965, Professor and Chairman—historical preservation

F. Andrew Schoolmaster III, Ph.D., Kent State, 1979, Assistant Professor—recreational geography, quantitative methods

Northeastern Illinois University

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL STUDIES

DATE FOUNDED: 1961 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A., Geography and Environmental Studies
M.A., Geography and Environmental Studies: Urban Land-Use Planning

GRANTED 7/1/79-6/30/80: 2

GRADUATE STUDENTS IN RESIDENCE: 82
NOT IN RESIDENCE: 0

CHAIRPERSON: Barbara J. Winston

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Karl M. Kriesel, Graduate Coordinator, Department of Geography and Environmental Studies, Northeastern Illinois University, 5500 N. St. Louis Avenue, Chicago, Illinois 60625
Telephone (312) 583-4050, ext. 780

PROGRAMS: Course requirements include 33 semester hours tailored to the individual's program and career interests. The sequence leading to an M.A. in Geography and Environmental Studies is designed to train persons for positions in education, industry, government, environmental interpretation, and other areas where geographers and environmentalists are needed. The sequence in Urban Land-

Use Planning is designed to train city planners specializing in land-use. Internships are required in the Urban Land-Use Planning Sequence.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Students must fulfill requirements for admission to the Graduate College, must have at least 15 hours in geography, or may be admitted conditionally with 6 semester hours in geography and must remove the deficiency. Contact Dean, Graduate College, for financial aid information.

STAFF:

C. Wallace Dierickx, Ph.D., Northwestern, 1955, Professor—economic, Africa, comparative world cultures

Robert F. Easton, M.A., Northwestern, 1967, Assistant Professor—physical, geomorphology, climatology

William L. Howenstine, Ph.D., Michigan, 1959, Professor—natural resources policy, planning, and management; environmental interpretation; population policy

Ying-Cheng Kiang, Ph.D., Columbia, 1955, Professor—urban, Chicago, Asia

Karl M. Kriesel, Ph.D., Michigan, 1970, AICP, Associate Professor—cultural, political, scope and philosophy of geography, planning

William Millard, Ph.D., Minnesota, 1969, Associate Professor—recreation, conservation, urban historic preservation

Musa Qutub, Ph.D., Iowa State, 1969, Professor—physical, hydrology and water resources, environmental education

Barbara Winston, Ph.D., Northwestern, 1974, Associate Professor and Chairperson—environmental education, environmental perception, geographic education

University of Northern Colorado

GEOGRAPHY DEPARTMENT

DATE FOUNDED: 1968 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A. in Social Science, D.A. (Doctor of Arts) in Geography

GRANTED 7/1/79–6/30/80: 3 M.A.

GRADUATE STUDENTS IN RESIDENCE: 19
NOT IN RESIDENCE: 7

CHAIRMAN: Steven L. Scott

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Steven L. Scott, Chairman, Geography Department, University of Northern Colorado, Greeley, Colorado 80639
Telephone (303) 351-2715

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PROGRAMS AND RESEARCH FACILITIES: *Doctor of Arts*—The Doctor of Arts degree is designed for those interested in creative teaching at the junior (community) or senior college level with a complementary commitment to research. Most course work is in geography; however, based upon individual needs and interests, the program is adequately flexible and the opportunity to work in supportive areas is strongly encouraged. Graduate level course work in pedagogy and a supervised teaching experience prepare the candidate for a college teaching career.

Research training culminates in a dissertation based upon original independent investigation of a geographic problem, a teaching strategy or technique pertinent to geography, or an original synthesis and evaluation of materials potentially valuable to college teaching in the discipline. *Master of Arts*—The Geography Department offers a Master of Arts degree in social science with a concentration in geography. The program is flexible and may be designed as a terminal degree or as a foundation for additional graduate study.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates year-round on the quarter system. Students may enter the program at the beginning of any quarter. An appropriate baccalaureate degree from an accredited institution and a formal application to the Office of the Graduate School are required for admission. Students in need of financial assistance to meet educational expenses are invited to correspond with the Financial Aids Office and Geography Department.

STAFF:

David B. Cole, Ph.D., Colorado, 1975, Associate Professor—geographic education, social geography, population

Charles O. Collins, Ph.D., Kansas, 1973, Associate Professor—Mexico and Caribbean, population, agriculture, cultural

John L. Dietz, Ph.D., Syracuse, 1970, Professor—economic, Anglo-America, Great Plains, U.S.S.R.

Kevin C. Kearns, Ph.D., St. Louis, 1966, Professor—political, South America, Ireland

Katherine L. Kutsche, Ph.D., Indiana, 1978, Assistant Professor—urban, transportation, planning

Paul L. Lehrer, Ph.D., Nebraska, 1962, Professor—physical, soils, Africa, western Europe

Richard K. Ormrod, Ph.D., Pennsylvania State, 1974, Associate Professor—recreation, man-environment, Caribbean

Steven L. Scott, D.A., Northern Colorado, 1973, Associate Professor—cartography, Anglo-America, Great Plains

Northern Illinois University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1968   GRADUATE PROGRAM FOUNDED: 1957

DEGREES OFFERED: M.S.

GRANTED 7/1/79–6/30/80: 6 M.S., 1 C.A.S. (Certificate of Advanced Study)

GRADUATE STUDENTS PART-TIME: 14
FULL-TIME: 18

CHAIRMAN: Charles E. Trott

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Prof. Charles E. Trott, Chairman, Department of Geography, Northern Illinois University, De Kalb, Illinois 60115
Telephone (815) 753–0631

PROGRAMS AND RESEARCH FACILITIES: A student who elects a major in geography leading to the Master of Science degree arranges a program of courses totaling a minimum of 30 semester hours in consultation with his adviser. This program will include a course in research design, and usually, a total of 20 semester hours of geography courses. Students may choose to write a thesis or elect the non-thesis option. Additional requirements include: (1) passing a course in advanced quantitative techniques or passing a reading knowledge examination in a modern foreign language appropriate to the student's research interests or satisfactory completion of a course in advanced field methods. This alternative is intended only for individuals teaching or planning to teach at the elementary or secondary levels, and (2) passing a comprehensive written examination.

Special facilities include laboratories for studies in cartography, climatology, meteorology, remote sensing and soils. The Department has two computer terminals. The Cartographic Laboratory is equipped with a Calcomp 663 drum plotter, 770 tape drive, Altek digitizer, Bausch and Lomb zoom transfer scope, Balplex plotter, Kelsh plotter, Diatype phototypesetting unit, Brown 3n1 process camera, and a photographic darkroom. A student-run weather station is equipped with Service A teletype and National Weather facsimile circuits. Additional equipment includes a variety of air quality monitoring instruments, radar facsimile receiver, and a low-altitude tethered balloonsonde. The University AMDAHL V7 and CDC CYBER 170 computers are accessible to any graduate student. In addition to the facilities of a rapidly growing University library, a map library with holdings of 139,000 maps and over 900 atlases is conveniently located.

The Department of Geography has developed staff strength in four clusters: applied meteorology/climatology, environmental management, applied urban/economic, and area studies. Graduate course groupings include applied meteorology, agro-climatology, climatic change, and environmental quality, evaluation and management. Other examples are programs in planning that include growth manage-

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ment, locational analysis, and the development of mapping systems for local and regional agencies. In addition, Geography participates in the programs of the Center for Southeast Asian Studies and the Center for Governmental Studies. The location of the University relative to the Chicago and Rockford metropolitan areas provides an impressive range of research opportunities in urban studies, planning, and environmental management.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: N.I.U. operates on a semester system. Admission as a graduate student requires a bachelor's degree from an accredited college or university, a GPA of at least 2.75 (4-point system), and approval of the Department of Geography. Admission beyond the Master's degree requires a GPA of 3.2 or above and Department approval. All prospective graduate students must take the Graduate Record Examination (verbal and quantitative) prior to admission.

Assistantships and fellowships carry stipends up to $4275 for the academic year plus waiver of registration and out-of-state fees. Applications for graduate assistantships and fellowships for 1981-82 should be sent prior to February 15, 1981. Geography also offers a variety of internships with planning agencies in the northern Illinois area. These internships provide a stipend and, in some cases, waiver of tuition and summer support. Students interested in internships should direct inquiries to the Department Chairman. N.I.U. does not discriminate on the basis of the race, creed, color or national origin of any applicant.

STAFF:

Lloyd D. Black, Ph.D., Michigan, 1940, Professor—regional planning, economic development (foreign aid)

Kenneth L. Bowden, M.S. Ed., Northern Illinois, 1957, Assistant Professor—hydrology, water resources, physical

Alan L. Cole, Ph.D., Michigan, 1962, Associate Professor—applied meteorology, instrumentation and measurements

Richard E. Dahlberg, Ph.D., Wisconsin, 1959, Professor—cartography

C. Daniel Dillman, Ph.D., Michigan, 1968, Professor—Latin America, rural landscapes, physical

B. Ross Guest, Ph.D., Chicago, 1951, Professor—environmental management, U.S.S.R., Anglo-America

Leonard J. Kouba, Ph.D., Boston, 1970, Associate Professor—conservation, physical, Africa

Cornelius J. Loeser, Ph.D., UCLA, 1965, Assistant Professor—cultural, East Asia

Donald W. Maxfield, Ph.D., Iowa, 1967, Associate Professor—urban, remote sensing

A. Steven Messenger, Ph.D., Michigan State, 1966, Associate Professor—soils, forestry, biogeography

Ralph A. Petersen, Ph.D., Wisconsin, 1975, Assistant Professor—synoptic climatology, cyclone dynamics

Clayton H. Reitan, Ph.D., Wisconsin, 1971, Associate Professor—meteorology, climatology

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Allen E. Staver, Ph.D., Wisconsin, 1969, Associate Professor—dynamic meteorology, numerical weather prediction

Charles E. Trott, Ph.D., Ohio State, 1969, Associate Professor and Chairman—urban, migration analysis, health planning, applied statistics

Jack R. Villmow, Ph.D., Wisconsin, 1955, Professor—climatology, meteorology, Eastern Europe, U.S.S.R.

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Karl, Richard C. "Folier Nutrient Monitoring and Treatments of Chlorotic Pin Oaks," 1980.* Mf., Univ. Microfilms.

Knauel, Richard L. "Role of Spatial Land Use Data in the Planning Process," 1980.* Mf., Univ. Microfilms.

Schramuk, Jeffrey. "Latent Heat and The Mass and Moisture Budgets of an Extratropical Cyclone," 1979.* Mf., Univ. Microfilms.

Stipek, Lawrence Arthur. "The Development of a Multidisciplinary Program of Education in Applied Cartography Based on a Survey of Employers," 1980.* Mf., Univ. Microfilms.

University of Northern Iowa

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1959 GRADUATE PROGRAM FOUNDED: 1969

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 3
NOT IN RESIDENCE: 6

HEAD: Basheer K. Nijim

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Basheer K. Nijim, Head, Department of Geography, University of Northern Iowa, Cedar Falls, Iowa 50613
Telephone (319) 273-2772

PROGRAMS AND RESEARCH FACILITIES: The prospective student will especially benefit from the Department's offerings in planning and applied economic and urban geography, cartography, methodology (theoretical and quantitative), population studies, environmental and resource management, cultural, political, and rural geography. Regional emphases include Anglo-America, East Asia, the Middle East, and Europe.

The Department has separate labs for cartography, photography, and physical geography, and it has access to excellent computer facilities.

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The program is flexible and provides extensive personal contact between the faculty and the students.

The Department publishes *Geographical Perspectives*, a semiannual journal.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. A graduate of an accredited undergraduate program may be admitted. A departmentally administered diagnostic examination is required of all new students. A minimum grade average of B must be maintained. Assistantships and other possibilities of financial support are available.

STAFF:

C. Murray Austin, Ph.D., Pennsylvania, 1971, Associate Professor—urban, economic, quantitative methods, theoretical, futures, geographic education

Roy Chung, M.A., Wisconsin-Madison, 1955, Associate Professor—population, theoretical, quantitative, developing areas

Robert E. Clark, Ph.D., Nebraska, 1974, Assistant Professor—cultural, rural settlement, historical geography of the United States, Europe, Anglo-America

Jon N. Efteland, Ph.D., Georgia, 1980, Assistant Professor—physical, environmental land use, soils, geomorphology, rural land use

James F. Fryman, Ph.D., North Carolina, 1980, Assistant Professor—population, political, air photo interpretation, cartography

Jonathan J. Lu, Ph.D., Washington, 1971, Professor—agricultural, economic, world food resources, East Asia, geography of the Bible

Basheer K. Nijim, Ph.D., Indiana, 1969, Professor—political, population, Middle East

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Dada, Julius. "Exploratory Data Analysis of Nigeria's 1963 Age Structures," 1980.*

Northern Michigan University

DEPARTMENT OF GEOGRAPHY, EARTH SCIENCE, AND CONSERVATION

DATE FOUNDED: 1923 GRADUATE PROGRAM FOUNDED: 1969

DEGREES OFFERED: M.A., M.A. in Education

GRANTED 7/1/79–6/30/80: 3

GRADUATE STUDENTS IN RESIDENCE: 13
NOT IN RESIDENCE: 15

HEAD: Jarl Roine

FOR CATALOG AND INFORMATION WRITE TO: Chairman, Graduate Programs Committee, Department of Geography, Earth Science, and Conservation, Northern Michigan University, Marquette, Michigan 49855
Telephone (906) 227-2500

PROGRAMS AND RESEARCH FACILITIES: The program is designed to provide for a broad range of interests leading to employment in teaching, business, and government service. The department is housed in a new science building with excellent equipment. Available are a new growing library, field courses, computer facilities, and internships in planning.

ACADEMIC PLAN: Semester system plus intersession and summer program. *Admission Requirements:* Bachelor's degree from accredited institution. *Financial Aid:* Graduate Assistantships available.

STAFF:

Steven A. Carlson, Ph.D., Washington, 1977, Assistant Professor—rural land-use planning, biophysical analysis, resources

Fillmore C. F. Earney, Ph.D., Michigan State, 1965, Professor—minerals, U.S.S.R., political

John P. Farrell, M.A., Michigan, 1955, Professor—cartography, field techniques, planning

Ivan J. Fende, M.A., Northern Michigan, 1964, Assistant Professor—conservation

John D. Hughes, Ph.D., Northwestern, 1963, Professor—Great Lakes, geomorphology, shoreline processes

Alfred N. Joyal, Ph.D. Candidate, Iowa, Instructor—recreation, behavioral, quantitative methods

Bernard C. Peters, Ph.D., Michigan State, 1969, Professor—historical, environmental perception

Jarl Roine, M.A., Indiana, 1951, Professor—urban, economic, planning

Sten A. Taube, M.A., Georgia, 1963, Associate Professor—meteorology, economic, Latin America

Northwestern University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1945

DEGREES OFFERED: M.A., M.S., Ph.D.

GRANTED 7/1/79–6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 0 Masters, 3 Ph.D.
NOT IN RESIDENCE: 0 Masters, 2 Ph.D.

CHAIRMAN: Michael F. Dacey

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor John C. Hudson, Department of Geography, Northwestern University, Evanston, Illinois 60201
Telephone (312) 492-7030

PROGRAMS AND RESEARCH FACILITIES: Courses and seminars in the various areas of faculty specialization listed below are augmented with substantial course work in other departments and programs such as economics, industrial engineering, urban systems engineering, management and transportation. Programs of study are worked out individually for each student and permit flexibility within the basic focus of the department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Admission is limited to the Fall quarter, which begins in late September. The basic Ph.D. program consists of a four-year sequence of courses, seminars and dissertation research. Students making satisfactory progress in the program are awarded a Master's degree (without thesis) after one year of graduate work. Successful defense of an evaluation paper and a dissertation proposal, normally in the third year, admits the student to Ph.D. candidacy. Departmental financial support for the first three years of the program is available to qualified students; the stipend for 1980-81 is $4500-$5000 plus full remission of tuition ($5940). All students participate both as teaching and research assistants. Applicants seeking financial support are encouraged to submit GRE scores. There is no terminal Master's degree program.

STAFF:

Michael F. Dacey, Ph.D., Washington, 1960, Professor of Geography and Geological Sciences—mathematical geography, spatial statistics, location theory

Jacqueline M. Desbarats, Ph.D., Bordeaux, 1971, Assistant Professor—social, behavioral

Edward B. Espenshade, Jr., Ph.D., Chicago, 1943, Professor Emeritus

Gary L. Gaile, Ph.D., UCLA, 1976, Assistant Professor—economic, Africa

John C. Hudson, Ph.D., Iowa, 1967, Professor—settlement, diffusion models, North America

Ohio State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1907 GRADUATE PROGRAM FOUNDED: 1907

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 4 M.A., 7 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 7 M.A., 21 Ph.D.
NOT IN RESIDENCE: 2 M.A., 3 Ph.D.

CHAIRPERSON: John N. Rayner

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. A. John Arnfield, Chairman, Graduate Committee, Department of Geography, The Ohio State University, 103 Administration Building, 190 North Oval Mall, Columbus, Ohio 43210
Telephone (614) 422-7954

PROGRAMS AND RESEARCH FACILITIES: Programs of study stress analytical approaches to geographic problems and include a component relating to mathematical and technical skills. Research problems undertaken by students at Master's and doctoral levels may be of a fundamental or applied nature. The overall program is intended to be flexible enough to provide the geographer with an appropriate background to undertake a career in academia, private industry, consulting firms, government or research institutes.

Graduate level programs are offered in cartography, climatology, the geography of development, locational analysis, political geography, quantitative analysis, resource analysis, social-population geography, transportation geography and urban geography. Further details on any of these fields are available on request.

Research is supported by an excellent library system housing some 3.5 million volumes, 1 million microforms, and 145,000 map sheets. Current serial subscriptions number 25,000 series and include virtually all journals of value in geographic research. A computer-based circulation system provides access to catalog data and information on location and availability of materials via public terminals. Computer-based literature searches also are available.

University computer facilities are based on an Amdahl 470V6, a large central processing system which, with an interconnected IBM 4341, supports a large baseload of batch and interactive processing. The system supports advanced software and text editing systems, graphic CRT terminals and plotters. A large digitizing system also is available.

The department supports laboratories for work in cartography and climatology. A large range of meteorological instrumentation is available, including radiometers, humidity, temperature and wind profile systems, an infrared thermometer and a variety of analog and digital electronic recording devices. A facsimile machine circuit to the National Weather Service in Washington provides current forecasts, satellite imagery and other products. The departmental numerical cartography laboratory has several state-of-the-art graphic CRT terminals interfaced to the main university computing system as well as hardcopy units, a digitizing tablet, plotter and graphic printer. Conventional cartographic equipment also is available.

Teaching associates are provided with office space and access to services and facilities to support their instructional activities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan.* Quarter System. Research skills are assessed in the Master's program by means of a research paper. Course work includes a core group of seminars emphasizing theoretical understandings and quantitative skills. The Master's comprehensive examination stresses one of the fields of specialization of the department. The doctoral program is designed intentionally to permit advanced graduate students the flexibility to pursue their specialized interests. A seminar on the scope, nature and methodology of the discipline is the only required element. Major and minor fields are examined; the Ph.D. dissertation topic falls within one or both of these fields. Work in related disciplines is encouraged and Ph.D. minor topics in other departments are possible in certain cases. *Admission Requirements.* Minimal grade point average of 2.7 (A = 4.0) or equivalent for foreign applicants. All applicants must take the aptitude portion of the Graduate Record Examination. *Financial Aid.* Teaching associateships are available. The 1980–81 first year stipend (9 month con-

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tract) is $4311, plus tuition and fees. Summer teaching is available for qualified students. Additional sources of funding include University Fellowships and research assistantships. Applicants requesting funding are encouraged to complete admission procedures by February 1. Further details on degree requirements, admissions procedures and financial aid are available on request.

STAFF:

A. John Arnfield, Ph.D., McMaster, 1973, Associate Professor—climatology

J. William Bradfield, M.A., Kent State, 1966, Assistant Professor—(OSU Regional Campus, Mansfield, Ohio)

Lawrence A. Brown, Ph.D., Northwestern, 1966, Professor—social, population, urban

S. Earl Brown, Ph.D., Wisconsin, 1957, Professor and Dean, Social & Behavioral Sciences—locational analysis, development (Europe)

Emilio Casetti, Ph.D., Northwestern, 1964, Professor—quantitative analysis, population, economic development

Victor Colombini, Ph.D., Boston, 1961, Associate Professor—(OSU Regional Campus, Lima, Ohio)

Kevin R. Cox, Ph.D., Illinois, 1966, Professor—political, social, urban

George J. Demko, Ph.D., Pennsylvania State, 1964, Professor—population, development (U.S.S.R.)

Howard L. Gauthier, Ph.D., Northwestern, 1966, Professor—transportation, urban, regional development

Vera L. Herman, M.A., Ohio State, 1947, Assistant Professor—physical, world regional

Henry L. Hunker, Ph.D., Ohio State, 1953, Professor—urban, industrial, resource analysis

Robert D. Klingensmith, Ph.D., Southern Illinois, 1975, Assistant Professor—(OSU Regional Campus, Newark, Ohio)

Nina S-N. Lam, Ph.D., Western Ontario, 1980, Assistant Professor—cartography, geographic information systems, spatial analysis, urban

Harold Moellering, Ph.D., Michigan, 1973, Assistant Professor—cartography, geographic information systems, locational analysis

George P. Patten, Ph.D., Northwestern, 1955, Professor—tropical agriculture, development (Latin America)

John N. Rayner, Ph.D., Canterbury, 1965, Professor and Chairman—climatology, quantitative analysis

Jeffery C. Rogers, Ph.D., Colorado, 1979, Assistant Professor—climatology

R. Keith Semple, Ph.D., Ohio State, 1969, Professor—quantitative analysis, development, locational analysis

W. Randy Smith, Ph.D., York, 1978, Assistant Professor—urban

Frank C. Stetzer, Ph.D., Iowa, 1977, Assistant Professor—urban, quantitative

Edward J. Taaffe, Ph.D., Chicago, 1952, Professor—transportation, geographic thought, development (North America)

An additional faculty member is to be appointed at the OSU Regional Campus, Marion, Ohio.

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Cobb, Robert Wayne. Analysis of Migratory Responses for Inmigration and Outmigration,'' 1979. *Mf., Univ. Microfilms.

Green, Milford Bennett. ''A Geographical Examination of Interlocking Directorates for Large American Corporations,'' 1980. *Mf., Univ. Microfilms.

McCarthy, Jeffrey James. ''Class, Community and Conflict Over the Urban Environment under Advanced Capitalism,'' 1979. *Mf., Univ. Microfilms.

Mitchelson, Ronald Leon. ''An Examination of the Psychophysical Function in Travel Mode-Choice Behavior,'' 1979. *Mf., Univ. Microfilms.

Nartowicz, Frank Zygmund. ''An Examination of Socio-Economic Differences Concerning Preferences for Residential Attributes,'' 1979. *Mf., Univ. Microfilms.

Visser, Sent. ''The Spatial Dynamics of Agricultural Intensity,'' 1979. *Mf., Univ. Microfilms.

Zimon, Henry Andrew. ''U.S. Regional Inequalities, 1950–1978: A Multi-Scale/Multi-Regional Inquiry Into the Patterns and Processes,'' 1979. *Mf., Univ. Microfilms.

Ohio University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1969 GRADUATE PROGRAM FOUNDED: 1971

DEGREES OFFERED: M.A., M.S.

GRANTED 7/1/79–6/30/80: 4

GRADUATE STUDENTS IN RESIDENCE: 31
NOT IN RESIDENCE: 3

CHAIRMAN: Frank E. Bernard

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Committee, Department of Geography, Ohio University, Porter Hall, Athens, Ohio 45701
Telephone (614) 594–5555

PROGRAMS AND RESEARCH FACILITIES: The Geography Department grants both the M.A. and M.S. degrees. The student may select one of two programs to obtain either degree: a thesis or a non-thesis track. The thesis track allows for some research specialization, usually requires two years to complete, and is designed for those continuing to the doctoral level. The non-thesis track allows for broad geographic training in areas of emphasis: cartography, resource management, area studies, economic, cultural, physical, land use planning, and urban. There is a two-part comprehensive exam for this program.

In addition, Ohio University offers excellent opportunities for interdisciplinary coursework in international studies and environmental science.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* Quarter System. *Admission Requirements:* Bachelor's degree with a minimum grade point average of 2.75 (4.0 scale), Graduate Record Examination. *Financial Aid:* Graduate teaching assistantships of $3500 for nine months plus full tuition scholarship. Appointment includes fee waivers for summer sessions before and after the term of employment. Financial assistance deadline is March 1.

STAFF:

Nancy R. Bain, Ph.D., Minnesota, 1973, Associate Professor—population, economic, urban

Frank E. Bernard, Ph.D., Wisconsin, 1968, Professor—resources, agriculture, Africa

Hubertus H. L. Bloemer, Ph.D., Union, 1977, Assistant Professor—cartography, remote sensing, transportation

James L. Cobban, Ph.D., UC, Berkeley, 1970, Associate Professor—cultural, land use planning, Southeast Asia

Ronald H. Isaac, Ph.D., Southern Illinois, 1974, Assistant Professor—bioclimatology, quantitative methods, computer mapping

Bob J. Walter, Ph.D., Wisconsin, 1968, Professor—political, geographic thought, Africa

Hubert G. H. Wilhelm, Ph.D., Louisiana State, 1968, Professor—settlement, historical, Anglo-America

Lynden S. Williams, Ph.D., Kansas, 1973, Associate Professor—population, Latin America, urban

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Barr, Ann. "New England Settlement Effects in Southeast Ohio," 1980.

Drobnock, George. "The Early Iron Industry of Vinton County, Ohio and its Effect on Land Tenure and Land Use," 1979.

Ijere, Joseph A. "Symmetry and Asymmetry in the Delimitation of States in a Federation: A Theoretical Application to Nigeria," 1979.

Snaf, Hussein Ahmad. "The Effects of Occupational Structure on The Residential Distributions of Columbus and Dayton, Ohio," 1980.

Oklahoma State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1940 GRADUATE PROGRAM FOUNDED: 1947

DEGREES OFFERED: M.S., Ed.D.

GRANTED 7/1/79–6/30/80: 6 M.S., 1 Ed.D.

GRADUATE STUDENTS IN RESIDENCE: 13 M.S., 1 Ed.D.
NOT IN RESIDENCE: 2 M.S., 1 Ed.D.

CHAIRMAN: Richard D. Hecock

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Richard D. Hecock, Department of Geography, Oklahoma State University, Stillwater, Oklahoma 74078
Telephone (405) 624-6248

PROGRAMS AND RESEARCH FACILITIES: Program of study leads to the M.S. degree and in certain instances to the Ed.D. degree. Emphasis is on human geography, resource management, and applications of remote sensing. Interdisciplinary options are available in Environmental Sciences and Historic Preservation. Cognate course work is often taken in economics, engineering, biological sciences, architecture, agricultural economics, and statistics. All plans of study for the M.S. require research reports or a thesis. Field experience required. Credit for internship experience may be earned. The University Cartographic Service and the Center for the Applications of Remote Sensing are affiliated with the Department. The latter is equipped with state-of-the-art computing, plotting, digitizing, and image processing equipment, and offers students an opportunity to learn and practice modern techniques of interpretation and analysis of a wide range of remotely sensed images. The University Library has large geography and periodical holdings, as well as good map, aerial photography and documents collections. Students have access to the University's IBM 370/158 computer, its peripheral equipment, and extensive software packages, both through batch processing stations and the remote terminals available within the department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system, including summer. Undergraduate grade point average of 3.0 (4.0 system) or better normally required for admission. Teaching and research assistantships, planning internships and other stipends range from $3000 to $4000 per year and include remission of out-of-state tuition. Special minority assistantships and tuition scholarships are available for Oklahoma residents.

STAFF:

W. A. "Tony" Blanchard, M.S., Louisiana State, 1979, Research Associate—Center for Applications of Remote Sensing

George O. Carney, Ph.D., (History), Oklahoma State, 1971, Associate Professor—historical, cultural, music, United States

Jerry D. Croft, Ed.D., Tulsa, 1971, Associate Professor—geographic education, Europe

Robert C. Fite, Northwestern, 1951, Professor—meteorology, climatology

Brad Gambill, M.R.C.P., Oklahoma, 1973, Visiting Assistant Professor—city planning

Mark Gregory, M.S., Penn State, 1975, Research Associate—Center for Application of Remote Sensing

Keith D. Harries, Ph.D., UCLA, 1969, Professor—social, urban

Richard D. Hecock, Ph.D., Clark, 1966, Professor and Chairman—outdoor recreation, resource management, Asia

Herbert Kershaw, M.S., Oregon State, 1960, Professor Emeritus and Visiting Professor—meteorology, climatology, oceanography

Gayle Maxwell, M.S., Georgia, 1964, Director, Cartography Service

Razia Nanji, M.Ed., McGill, 1972, Visiting Assistant Professor—Africa

Robert E. Norris, Ph.D., Iowa, 1970, Professor—political, quantitative methods, data processing

John F. Rooney, Jr., Ph.D., Clark, 1966, Professor—sport and recreation, resource management, United States

Stephen J. Stadler, Ph.D., Indiana State, 1979, Assistant Professor—climatology, remote sensing

James H. Stine, M.S., Oklahoma State, 1953; Advanced Graduate Work, Washington, Associate Professor—economic and urban systems, location and interaction theory, cartography

Steven W. Tweedie, Ph.D., Syracuse, 1969, Associate Professor—computer techniques, socio-cultural, United States

John D. Vitek, Ph.D., Iowa, 1973, Associate Professor—physical, geomorphology, natural hazards

Stephen J. Walsh, Ph.D., Oregon State, 1977, Assistant Professor and Director of Center for Applications of Remote Sensing—remote sensing, climatology, physical, resource management

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ed.D.:

Sombitsiri, Virawan. "Hinterland Provinces in Relation to Migration to Bangkok," 1980.

Master's:

Gebhardt, Mary. "A Geography of Beer in the United States: 1933–1977," 1979.

Jones, Ricky. "Comparisons of Distance Decay Patterns Among Recreation Users for Six Central United States Rivers," 1979.

Lewis, David. "The Geography of Stomach Cancer in the United States," 1979.

Mitra, Sujata. "A Stochastic Analysis of the Diffusion of Cholera in India in 1971," 1980.

Rupert, Mark. "A Geographic Analysis of Professional Baseball's First-Year Player Signings, 1965–1977," 1980.

Sturdevant, James A. "Burglary—An Ecological and Aerial Photographic Analysis," 1979.

University of Oklahoma

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: (Ph.D.) 1965

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 3 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 14 M.A., 11 Ph.D.
NOT IN RESIDENCE: 24 Ph.D.

CHAIR: Neil Salisbury

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Admissions Committee, Department of Geography, University of Oklahoma, Norman, Oklahoma 73019
Telephone (405) 325-5325

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers opportunities leading to the M.A. and Ph.D. degrees with programs tailored to fit the interests and needs of each student. Although the department specializes in several traditional areas of the discipline, we encourage students to develop new and innovative approaches to geographic research and career development. On-going programs of research in both basic and applied areas provide students with the opportunity to obtain first-hand experience in geographic problem-solving. Among the areas of research concentration are: environmental assessment, climatic change and its impacts, geographic information systems, spatial organization and spatial modeling, human ecology and prehistory, quality of life, historical geography, American minorities, spatial diffusion, and spatial aspects of mental health care.

Students have a chance to relate to a variety of strong University programs: courses and faculty in other departments (frequently with regional and city planning, law, history, geology, economics, sociology, anthropology, marketing, botany, and civil engineering), interdisciplinary programs (such as the Science and Public Policy Program and the Southwest Center for Human Relations Studies), and research offices (such as the Bureau of Government Research, the Bureau for Business and Economic Research, the Bureau of Water and Environmental Resources Research, the Oklahoma Geological Survey, the Oklahoma Climatological Survey, and the Oklahoma Biological Survey). Close connections are maintained with the Department of Geography at Oklahoma State University, which offers complementary activities and opportunities.

The Department is housed in the new Social Sciences Center. Its facilities include a full-service remote computing terminal in the building, linked to the university IBM 370-158 computer; two TSO lines; Tektronix 4010 and 4631; two 30-inch Calcomp plotters; a digitizer; a darkroom and cartographic production facilities, including a Brown 400 copy camera; and collections of maps, air photos, and other imagery.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates with two semesters and one eight-week summer session. Admission decisions are based on an evaluation of transcripts, letters of recommendation, GRE aptitude scores, and any other material that an applicant wishes to be considered. Graduate assistantships and other kinds of financial aid are available each year.

STAFF:

Marvin W. Baker, Jr., Ph.D., Syracuse, 1970, Associate Professor—urban, environmental policy, Latin America, Anglo-America

Charles E. Barb, Jr., Ph.D., Washington, 1974, Associate Professor of Civil Engineering and Geography—urban information systems, geocoding, computer graphics, urban transportation

Daniel R. Fesenmaier, Ph.D. candidate, Western Ontario, Assistant Professor—quantitative methods, spatial organization

James M. Goodman, Ph.D., Northwestern, 1963, Associate Professor—physical environments, geomorphology, Native American resources and land use in the American Southwest

John M. Harlin, Ph.D., Iowa, 1975, Assistant Professor—quantitative methods, climate, geomorphology

John A. Harrington, Jr., Ph.D. candidate, Michigan State University, Assistant Professor—biogeography, climatology, remote sensing

Michael Libbee, Ph.D., Syracuse, 1975, Assistant Professor of Geography and Education—geographic education, research methods, cultural

Edward J. Malecki, Jr., Ph.D., Ohio State, 1975, Assistant Professor—urban systems, diffusion, urban and regional development, research methods

Richard L. Nostrand, Ph.D., UCLA, 1968, Associate Professor—historical, social and cultural geography of ethnic groups, Anglo-America, the American Southwest

Neil E. Salisbury, Ph.D., Minnesota, 1957, Professor—natural resources and resource use patterns, fluvial morphology and landscape systems,

David R. Seamon, Ph.D., Clark, 1977, Visiting Assistant Professor—cultural, social

Christopher J. Smith, Ph.D., Michigan, 1974, Assistant Professor—behavioral and social, mental health and well-being, locational conflicts, "sense of place," research methods

Stephen M. Sutherland, Ph.D., Illinois, 1963, Associate Professor—climatic change, weather modification, physical

Gary L. Thompson, Ph.D., Michigan State, 1968, Associate Professor—economic, transportation, regional analysis, Soviet Union

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Elliott, Harold M. "The Structure and Evolution of the Geographic System: A Study in Cultural Change," 1979.* Mf., Univ. of Michigan.

Khalfallah, Ramadan A. "Migration, Labor Supply and Regional Development in Libya," 1979.* Mf., Univ. of Michigan.

Master's:

Darch, Janice P. "Soils and Geomorphological Studies in Northern Belize, Central America," 1979.*

Ettlinger, Nancy. "Dependency and Urban Growth: A Reformulation of the Concepts of Primacy and Rank-size," 1980.*

Opuni, Kwame. "Some Considerations of Tourist Flows in Western Europe Before and After the 1973 Oil Crisis," 1979.*

Oregon State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1946 GRADUATE PROGRAM FOUNDED: 1952

DEGREES OFFERED: M.S., M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 17 Masters, 8 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 74 Masters, 13 Ph.D.
NOT IN RESIDENCE: 1 Masters, 7 Ph.D.

CHAIRMAN: Richard M. Highsmith, Jr.

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Thomas J. Maresh, Department of Geography, Oregon State University, Corvallis, Oregon 97331
Telephone (503) 754-3141

PROGRAMS AND RESEARCH FACILITIES: The Department specializes in the fields of resource geography, environmental geography, physical geography, and applied economic geography. The typical graduate program contains a core major, research methodology, and a related minor. One language is required for the Ph.D. Minors may be partly or wholly in a second field of geography or may be integrated from the wide range of relevant disciplines and fields represented on this land grant university campus. Master's degree candidates may elect either a thesis or a non-thesis option.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admission requirements:* 3.00 GPA in last two undergraduate years and three letters of recommendation. Quarter system. *Financial aid:* Teaching and research assistantships.

STAFF:

Robert E. Frenkel, Ph.D., UC, Berkeley—biogeography, conservation
Oliver H. Heintzelman, Ph.D., Washington, Professor Emeritus—recreation resources
Richard M. Highsmith, Jr., Ph.D., Washington—agricultural, land resources use
Philip L. Jackson, Ph.D., Kansas—land resource management, environmental hazards policy planning
J. Granville Jensen, Ph.D., Clark, Professor Emeritus—biotic resources, resource geography of Mexico
A. Jon Kimerling, Ph.D., Wisconsin—cartography, remote sensing
James F. Lahey, Ph.D., Wisconsin—climatology, air photo interpretation, remote sensing
Thomas J. Maresh, Ph.D., Illinois—mineral, industrial
Gordon E. Matzke, Ph.D., Syracuse—biotic resources, zoogeography, conservation

Keith W. Muckleston, Ph.D., Washington—water resources
Mary Lee Nolan, Ph.D., Texas A&M—responses to hazards, recreation
Ray M. Northam, Ph.D., Northwestern—urban, transportation
James R. Pease, Ph.D., Massachusetts—land use planning, resource planning
Charles L. Rosenfeld, Ph.D., Pittsburgh—applied physical geography, hydrology, geomorphology

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Bauer, Webb Sterling. "A Case Analysis of Oregon's Willamette River Greenway," 1980.* Mf., Univ. Microfilms.

Grant, Roland Lester. "A Statistical Analysis of Extreme Chinooks in Montana as they Relate to Large Scale Circulation Changes," 1979. *Mf., Univ. Microfilms.

Marston, Richard Alan. "The Geomorphic Significance of Log Steps in Forest Streams of the Oregon Coast Range," 1980. *Mf., Univ. Microfilms.

McDowell, Theodore R. "Geographic Variations in Water Quality and Recreational Use Along the Upper Wallowa River and Selected Tributaries," 1979. *Mf., Univ. Microfilms.

Nellis, Marvin Duane. "Water Management in the North Deschutes Unit Irrigation District: Geographic Perspectives and Remote Sensing Applications," 1980. *Mf., Univ. Microfilms.

Rabii, Hassan. "An Investigation of the Utility of LANDSAT 2 MSS Data to the Fire Danger Rating Area, and Forest Fuel Analysis Within Crater Lake National Park, Oregon," 1979. *Mf., Univ. Microfilms.

Rathburn, Arthur C. "A Framework for the Determination of the Suitability of Undeveloped Land in the Intermountain West for Use as Cropland," 1980. *Mf., Univ. Microfilms.

Tsutsui, Setsuo Harry. "Oregon's Mid-Willamette Valley Wetlands: Agricultural Uses, Alternative Uses, Problems and Trends," 1979. *Mf., Univ. Microfilms.

M.S.:

Benson, Elizabeth A. "Housing Growth and Provision of Domestic Water Supply in North Albany, Oregon: 1966–1975," 1979.

Bonacker, Gregg Lynn. "The Spatial Characteristics of the Seafood Processing Industry," 1979.

Burgess, Lynn Ann. "Impact Assessment of the Proposed Tektronix Development on the City of Lebanon, Oregon," 1980.

Burke, Constance Jeanne. "Historic Fires in the Central Western Cascades, Oregon," 1979.*

Carlson, John James. "Preserving Open Space and Agricultural Land Through a Program of Transfer of Development Rights," 1980.

Chase, Nicholas Scott. "The Reclamation Potential of a Sand and Gravel Site in Linn County, Oregon: Lower Kiger Island, 1979.

Danley, Mark Stephen. "Resources Allocation and the Ability to Pay: A Case Study of Float Permits in Hells Canyon," 1980.*

Elliott, Gerald E. "A Vacant Industrial Site Survey for the Corvallis, Oregon Urban Area," 1979.

Hobbs, Drusilla. "Impacts of the Salem Parkway Upon Biotic Resources and Water Quality," 1979.

Kelly, Judy A. "Selected Environmental Concerns for Small Hydroelectric Development in Oregon," 1979.

Maule, Peter Anthony. "The Feasibility of Applying Air Photo Interpretation to the Locating, Analyzing, and Development of Wind Power Sites," 1979.

Olson, Thomas. "The Use of Riparian Open Space as an Alternative to Structural Flood Control Measures in the United States," 1980.

Peck, Denise. "Implementation of the Federal Safe Drinking Water Act in Oregon: A Study of Problems and Issues," 1979.

Rademacher, Christopher Lee. "Morphometric Properties of Nivation Hollows on Hart Mountain, Lake County, Oregon," 1980.*

Swanson, Serman R. "A Proposed Willamette River Greenway Plan and Ordinance for Linn County," 1980.

Taylor, Alan Henry. "Plant Communities and Elevation in the Diked Portion of Joe Ney Slough: A Baseline Assessment of a Marsh Restoration Project in Coos Bay, Oregon," 1979.*

Watkins, Russell L. "Factors Affecting Animal Detection and Identification Using Remote Sensing: With Thermal Infrared as an Example," 1980.

University of Oregon

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1920's GRADUATE PROGRAM FOUNDED: 1923

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 3 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 16 M.A. 7 Ph.D.
NOT IN RESIDENCE: 7 M.A. 14 Ph.D.

HEAD: Carl L. Johannessen

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Administrative Assistant, Department of Geography, University of Oregon, Eugene, Oregon 97403 Telephone (503) 686-4555

PROGRAMS AND RESEARCH FACILITIES: Staff interests in advanced graduate training include physical, cultural, historical, and urban geography, Latin America, Africa, Europe, and North America. Strong emphasis is placed on field research.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Oregon is on the quarter system. The Department selects for admission on the basis of letters of recommendation, grade point average, and scores on the Graduate Record Examination. Graduate teaching fellowships are available ($3200 to $4000 for 1/3 time).

STAFF:

Samuel N. Dicken, Ph.D., UC, Berkeley, 1931, Professor Emeritus—North America, Oregon, coastal geomorphology

Carl L. Johannessen, Ph.D., UC, Berkeley, 1959, Professor—plant geography, Latin America

William G. Loy, Ph.D., Minnesota, 1967, Professor—cartography, photo interpretation, geomorphology (on sabbatical, 1980–81)

Jack P. Mrowka, Ph.D., UCLA, 1974, Assistant Professor—geomorphology, hydrology, Latin America

Clyde P. Patton, Ph.D., UC, Berkeley, 1953, Professor—cultural, climatology, Europe (on sabbatical, 1980–81)

Edward T. Price, Ph.D., UC, Berkeley, 1950, Professor—cultural, historical, North America

Gary H. Searl, M.S., Oregon, 1966, Adjunct Assistant Professor—geographic education, Oregon

Everett G. Smith, Jr., Ph.D., Minnesota, 1962, Professor—urban, social, North America

Alvin W. Urquhart, Ph.D., UC, Berkeley, 1962, Professor—cultural, environmental alteration

Ronald Wixman, Ph.D., Chicago, 1978, Assistant Professor—U.S.S.R., East Europe, cultural

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Price, Richard L. "A Geography of Tourism: Settlement and Landscape on the Sardinian Littoral," 1980.

Master's:

Duerr, Richard. "Orchards of Lane County," 1980.

Infante, Raimundo. "The Barrier Effects on Urban Expansion: A Case Study, Eugene, Oregon," 1979.

Sorenson, Charles. "Oregon Partisan Electoral Geography, 1946–1978," 1979.

The Pennsylvania State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1937 GRADUATE PROGRAM FOUNDED: 1948

DEGREES OFFERED: M.S., Ph.D.

GRANTED 7/1/79–6/30/80: 3 M.S., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 22 Masters 21 Ph.D.
NOT IN RESIDENCE: 8 Masters 11 Ph.D.

HEAD: Ronald F. Abler

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Ronald Abler, Head, Department of Geography, 302 Walker Building, University Park, Pennsylvania 16802
Telephone (814) 865-3433

PROGRAMS AND RESEARCH FACILITIES: Individual graduate programs are built around fifteen research interests:

American Landscape: Visual properties of the American environment; origin and character of differences in landscape from place to place; symbolism of natural and artificial landscapes in American culture, past, present, and future.

Behavioral Geography: Environmental cognition; cognitive mapping; place preferences of inter-regional migrants; residential site selection and intra-urban migration; micro-spatial behavior of individuals and groups.

Communications Systems: Geographical organization and social impacts of postal, telephonic, and cable television networks; national and international information flows; effects of communications media on culture.

Cultural Geography of Anglo-America: Spatial patterns in American life, material and non-material, past and present; problems in general cultural theory with special reference to northeastern United States.

Cultural Geography of Southeast Asia: Population problems; mobility and migration; economic development; transportation; urbanization.

Environmental Pollution Control: The Department of Geography participates in Penn State's master's program in environmental pollution control; numerous options exist for individual specialization.

Geographic Analysis: Cartography; computer modeling; computer graphics and data display; structure and properties of geographic data systems; use of normative models in research design; statistical methods and applications; simulation.

Geography of the Developing World: Problems of regional development in Africa, Latin America, Southeast Asia, southern Europe, economic geography of South Asia, radical theories of economic development.

Geographic Theory: Structure of geographic inquiry; nature of the science of geography; geographic thought within the history of science; systems theory and location theory.

Human Geography of the U.S.S.R.: Problems of demographic and economic development in the Soviet Union (in cooperation with the University's Soviet Language and Area Center).

Human Use of Environment: Structure and dynamics of man-environment systems; cultural ecology; resource assessment and allocation; land use management; agricultural systems and development in the Third World; energy systems analysis.

Industrial Location: Industrial location theory; spatial analysis of manufacturing systems; problems of industrial development; factors of localization of manufacturing.

Macro-spatial Analysis in Regional and Urban Development: Public policy and location of public and private facilities; regional economic analysis; metropolitan spatial structure; transportation and modernization processes; space-distorting properties of communications systems; spatial diffusion processes; regional and urban planning.

Population Problems: Evolution of present spatial patterns of population growth and characteristics; population problems in developing societies; population distribution and redistribution, emphasis on United States.

Regional Economic Development: Problems of regional income inequalities within the developed nations; planning for optimal socio-economic growth within the context of a multi-regional system.

The Department has no specific course requirements. Programs of study are arranged with advisors and committees to suit individual needs and professional aims. A thesis, or two research papers, is required for the M.S. degree.

The Department occupies excellent facilities on a beautiful campus. Available facilities include several computer systems: IBM 3033, E&S Picture System, etc.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University follows the term system. Each term (fall, winter, spring, and summer) is ten weeks. Applicants must have maintained during their junior and senior years overall grade point averages equivalent to 3.0 (A = 4.0) for admission. GRE scores must be submitted with application materials. The Geography Department offers on a competitive basis a number of teaching and research assistantships each year. Half-time appointments carry a stipend of $4104 for three terms plus a grant-in-aid to cover all tuition fees for the academic year. Other awards include: grants-in-aid; University Fellowships.

STAFF:

Ronald F. Abler, Ph.D., Minnesota, 1968, Associate Professor—history of geography, geography of communications systems, urban, cartography

Roger M. Downs, Ph.D., Bristol, 1970, Associate Professor—behavioral, environmental cognition

Rodney A. Erickson, Ph.D., Washington, 1973, Associate Professor—economic, urban, regional economic development

Cecil W. Goodwin, Ph.D., Michigan, 1976, Assistant Professor—physical, man-environment relations

Peter R. Gould, Ph.D., Northwestern, 1960, Professor—methodology, human

C. Gregory Knight, Ph.D., Minnesota, 1970, Professor—environmental systems, cultural ecology, Africa

Peirce F. Lewis, Ph.D., Michigan, 1958, Professor—American landscapes

E. Willard Miller, Ph.D., Ohio State, 1941, Professor Emeritus—minerals, geography of manufacturing

Allan L. Rodgers, Ph.D., Wisconsin, 1950, Professor—industrial location, economic geography of the U.S.S.R. and Italy, regional economic development

Paul D. Simkins, Ph.D., Wisconsin, 1961, Professor—population, migration, Latin America

Frederick L. Wernstedt, Ph.D., UCLA, 1953, Professor—Southeast Asia, tropical, climatology

Anthony V. Williams, Ph.D., Michigan State, 1968, Associate Professor—human, computer applications, quantitative techniques

Lakshman Yapa, Ph.D. Syracuse, 1969, Associate Professor—economic development, third world, political economy, spatial diffusion, quantitative methods, South Asia

Wilbur Zelinsky, Ph.D., UC, Berkeley, 1953, Professor—cultural, historical, population, North America

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:
Ph.D.:
Rudnicki, Ryan. "Peopling Industrial America: Formation of Italian and Polish Settlements in the Manufacturing Heartland of the United States," 1979. Mf. Univ. Microfilms.
Master's:
Gerbers, Ronald Wayne. "The Country Cemetery as Cultural Epitaph: The Case of Penns and Nittany Valleys, Pennsylvania," 1979. Mf. Univ. Microfilms.
Pease, Douglas R. "Site Selection and Competition Among Fast-Food Chains: An Examination of Theory and Practice," 1979. Mf. Univ. Microfilms.

University of Pennsylvania

REGIONAL SCIENCE DEPARTMENT

DATE FOUNDED: 1958 **PH.D. PROGRAM FOUNDED: 1958 (GRADUATE FACULTY OF ARTS AND SCIENCES)**

DEGREES OFFERED: A.M., Ph.D.

GRANTED 7/1/79-6/30/80: 10 M.A., 5 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 42
NOT IN RESIDENCE: 25

CHAIRMAN: Stephen Gale
GRADUATE GROUP CHAIRMAN: Ronald E. Miller

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Admission's Officer, Regional Science Department, University of Pennsylvania, 3718 Locust Walk, 130 McNeil/CR, Philadelphia, Pennsylvania 19104
Telephone: (215) 243-8412

PROGRAMS AND RESEARCH FACILITIES: Regional Science is an interdisciplinary social science department concerned with the locational behavior of individuals and groups, institutions and governments. In addition to studying the spatial distribution and redistribution of specific activities and actors (e.g., firms, households), the field is also concerned with structure and development of national and regional social and economic systems. In practice, the orientation of the field has also led to very close relationships among theoretical research, planning, and policy in both the public and private sectors.

Study in the Department of Regional Science has historically led to a variety of job opportunities both in the United States and abroad. These have included teaching and research at universities (in departments of economics, geography, environmental science, city and regional planning, and public policy); research positions in public and private agencies; and specialists working with planning commissions, resource and area development agencies, and in firms which are engaged in marketing, land development, transportation, and industrial location.

The Degree of Master of Arts (A.M.)—The master's degree provides the student with basic theory and analytical tools for research. The degree prepares graduates for entry into middle level professional positions.

The master's degree is awarded upon completion of eight courses, presentation of a research paper, and successful performance in a comprehensive examination. Usually the program requires one year of study and research.

Master's courses include two devoted to theoretical development, four concentrating on teaching in research techniques, and two selected by the student.

Programs are available leading to joint master's degrees in regional science and city planning (A.M./M.C.P.), in regional science and public policy (A.M./M.A.P.P.), and in regional science and regional planning (A.M./M.R.P.). Joint programs generally require from two to three years of study.

The Degree of Doctor of Philosophy (Ph.D.)—The Ph.D. program provides highly individualized training in theory, methods, and research in regional science. The degree prepares candidates for university research and teaching, as well as for advanced work in a number of fields.

The first year of the Ph.D. program includes courses required for the master's degree. The department encourages the substitution or election of more advanced courses (e.g., R.S. 602 in addition to R.S. 601; R.S. 626 in place of R.S. 524). Students take the comprehensive examination for the master's degree as a qualifying examination for formal admission to the second-year program.

At the start of the second year of graduate work, each student selects an Advisory Committee of three faculty members with whom he or she coordinates further course selections and research activities. Two courses in advanced quantitative analysis are required. In addition, the student must participate each semester in the departmental research seminar (R.S. 701).

Areas of research specialization include location theory, urban and regional development, spatial models and statistics, land-use and transportation, spatial population analysis, locational aspects of planning and policy analysis and environmental analysis.

Award of the doctor's degree follows completion of the dissertation and successful performance in an oral examination on the dissertation and related topics. Dissertation research is normally done in residence.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admissions*—Applications are welcome from students, professionals, and scholars in a wide range of fields. Students are required to take the Aptitude Test of the Graduate Record Examination (GRE) and to have proficiency in English. Applicants whose active language is English ordinarily submit results of the Test of English as a Foreign Language (TOEFL). Information on the GRE and TOEFL is available from the Educational Testing Service, Princeton, New Jersey, and Berkeley, California, or from the United States Information Service located in offices of a United States Consul General abroad.

Some applicants may need additional mathematical preparation for entrance into courses. Many courses, for example, require some knowledge of calculus. Arrangements can be made to provide such preparation when the candidate is otherwise well prepared for graduate work.

Financial Aid—The University offers a limited number of fellowships to Ph.D. students. Applications for financial aid for the 1981-82 academic year must be filed by February 1, 1981.

The number of grants offered through the University for first-year students is necessarily limited and the competition is keen. Prospective students who need assistance should therefore apply to other sources as well (e.g., foundations, government).

FACULTY:

W. Bruce Allen, Ph.D., Northwestern, 1969, Professor of Regional Science and Transportation—microeconomic analysis of location and transportation

James Bennett, Ph.D., MIT, 1978, Assistant Professor of Regional Science and Peace Science—modeling structural change, regional political and economic development

Peter D. Blair, Ph.D., Pennsylvania, 1976, Assistant Professor of Regional Science—energy system modeling and simulation, energy policy analysis

Robert C. Douglas, Ph.D., Pennsylvania, 1978, Lecturer on Regional Science—American economic history, regional and urban development, spatial market systems analysis

Bruce Fitzgerald, Ph.D., Duke, 1974, Assistant Professor of Regional Science and Peace Science—economic analysis of spatial systems

Thomas Fogarty, Ph.D., Pennsylvania, 1978, Assistant Professor of Regional Science and Peace Science—regional political economy, social choice, location and policy games

Masahisa Fujita, Ph.D., Pennsylvania, 1972, Assistant Professor of Regional Science—location theory, regional and urban growth and planning

Stephen Gale, Ph.D., Michigan, 1969, Associate Professor of Regional Science, Peace Science, City and Regional Planning, and Public Policy Analysis, and Chairman—urban information systems, locational decision-making, philosophy of social sciences

Aaron Gellman, Ph.D., MIT, 1957, Adjunct Professor of Regional Science—transport management and the process of innovation

Ralph Ginsberg, Ph.D., Columbia, 1966, Professor of Regional Science—spatial demography, stochastic models, statistical analysis, and organization theory

Norman J. Glickman, Ph.D., Pennsylvania, 1969, Associate Professor of City and Regional Planning and Regional Science—economic analysis of spatial problems, urban economics, impact analysis

Britton Harris, M.A., Chicago, 1951, 1907 Professor of Transportation Planning and Dean of the School of Public and Urban Policy—planning theory, land-use and transportation models, optimization theory

Phyllis Kaniss, Ph.D., Pennsylvania, 1978, Lecturer on Regional Science—evolutionary theory, hierarchy theory, analysis of informational processes in social and biological systems

Aaron Katsenelinboigen, Ph.D., Moscow State Economic Institute, 1966, Professor of Social Systems Science—theory of planning systems, links between national and regional planning

Janice F. Madden, Ph.D., Duke, 1972, Associate Professor of Regional Science and Undergraduate Chairman—spatial labor economics and demography

Ronald E. Miller, Ph.D., Princeton, 1961, Professor of Regional Science and Chairman of the Graduate Group—input-output analysis, applications of calculus of variations and maximum principle techniques

Thomas A. Reiner, Ph.D., Pennsylvania, 1963, Professor of Regional Science and City and Regional Planning—regional planning and urbanization in developing nations, normative modeling, planning theory

Arie P. Schinnar, Ph.D., Carnegie-Mellon, 1976, Assistant Professor of Public Policy and Regional Science—economic and demographic accounts, human resource planning

Tony E. Smith, Ph.D., Pennsylvania, 1969, Professor of Regional Science—theoretical foundations of spatial interaction behavior

Daniel R. Vining, Ph.D., Pittsburgh, 1974, Associate Professor of Regional Science—applied statistics, ecological models of urban change, migration

Philip A. Viton, Ph.D., UC, Berkeley, 1977, Assistant Professor of Regional Science and Transportation—economics of urban transportation, regulation and environmental issues

Alan Wilson, M.A., Cambridge, 1964, Adjunct Professor of Regional Science—spatial modeling

James Zucchetto, Ph.D., Florida, 1975, Assistant Professor of Regional Science—ecological modeling and theory, regional energy analysis, energy-economic relationships, environmental impact and evaluation

TITLES OF DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Houle, Rachel. "Human Capital as an Explanation of Interregional Income Differential," 1979.

Moulaert, Frank. "Conservative Ridge Estimation," 1979.

McDonough, Steven. "An Empirical Analysis of Suburban Industrial Park Development and Industrial Site Prices," 1980.

Ogawa, Hideaki. "A General Model of Urban Spatial Structure: Nonmonocentric and Multicentric," 1980.

Williams, Daniel. "Implementation, Evaluation, and Improvements in a Linear Programming, Rural Economic Development Planning Model: Application in Northwest Arkansas," 1980.

University of Pittsburgh

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1943 GRADUATE PROGRAM FOUNDED: 1943

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 3 M.A., 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 23 M.A., 10 Ph.D.
NOT IN RESIDENCE: 0 M.A., 4 Ph.D.

CHAIRMAN: Hibberd V.B. Kline, Jr.

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FOR CATALOG AND FURTHER INFORMATION WRITE TO: Department of Geography, 4S01 Forbes Quadrangle, University of Pittsburgh, Pittsburgh, Pennsylvania 15260
Telephone (412) 624-5508

PROGRAMS AND RESEARCH FACILITIES: The Department offers a broad array of courses and seminars carrying graduate credit. These are arranged in programs which relate to faculty specialties within the Department, and draw to varying degrees upon the resources of other social science departments and graduate units throughout the University.

The department offers two M.A. programs: a research-oriented program focusing on course work and thesis research, and an applications-oriented program focusing exclusively on course work.

Studies leading to the Ph.D. in geography stress research in the form of a dissertation. Course work, however, is required in preparation for the comprehensive examination.

Student participation in the formulation and improvement of existing programs is encouraged.

Emphasis is placed on quantitative analysis as well as on the traditional methodologies. Students have full access to the DEC10 batch and time-sharing system of the Computer Center, to computer terminals and data resources of the Social Science Computer Research Institute, and to calculators in the department. The Department is equipped for instruction in cartography, photo-interpretation and remote sensing, laboratory methods in experimental geomorphic process, and field methods. The Department occupies modern and spacious facilities including integral seminar and laboratory rooms.

Areas of Specializations: Specializations include: Economic Geography (emphasizing urban and transportation), Physical Geography (emphasizing geomorphology and climatology), Cultural Geography (emphasizing cultural diffusion and population), Resources Geography (emphasizing environmental studies and public policy). Regional emphases of the department include Latin America, East Asia, Africa, and the United States.

Related Programs: The geography department maintains close relationships with the Latin American Program, the Asian Studies Program, the Social Science Computer Research Institute, and the University Center for Social and Urban Research. The library of the East Asian section is rated among the ten most important collections of Chinese and Japanese materials in the country. A professional bibliographer in Hillman Library supports departmental research. Geography employs a full-time professional cartographer.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Pittsburgh is on a three-term academic calendar. The Fall term begins after Labor Day and ends before Christmas; the Winter term begins after the New Year and ends at the third week in April. The Spring term begins before the first of May and ends in mid-August. In the Spring term, courses are also given in a Spring and Summer Session, each seven and one-half weeks long. Since the geography program covers all three terms, the student has the option of the terms in which he/she will earn residence and make progress toward his/her degree objective.

Admission requirements for full graduate standing are a "B" average at an accredited undergraduate institution, or a Master's degree from a recognized department or institution. Transcripts of all previous study and letters of recommendation are also required. There are no limitations as to subject matter previously studied.

The requirements for the M.A. degree include two terms of full residence, which may be earned through part-time attendance, and a comprehensive examination. Students who seek a degree through the applications-oriented program must in addition take certain courses and present seminar or independent study papers for evaluation. Students in the academically-oriented program present and defend a thesis.

Requirements for the Ph.D. degree include six terms of full residence beyond the baccalaureate degree. Two terms of residence may be transferred from another institution with a Master's degree or its equivalent, and some additional residence may be granted by transfer under appropriate circumstances. At least two terms of residence must be earned by full-time attendance. Other requirements for the Ph.D. are a preliminary examination given early in graduate study in the department; mastery of research tools, which may include a foreign language or languages, is arranged on an individual basis between the student and his/her faculty advisor, subject to the approval of the faculty; a comprehensive examination; an oral overview of the dissertation proposal; and finally, an oral defense of the dissertation.

A variety of financial assistance is available, including departmental teaching fellowships, Mellon and other University fellowships, and scholarships. Pennsylvania residents are entitled to a tuition subsidy. Many of these stipends and grants provide support for all three terms of the academic year. Part-time academic employment often is available in the Advising Center for the College of Arts and Sciences, in the School of General Studies (evening), at the regional campuses of the University, and in other institutions in the Pittsburgh area.

STAFF:

Jacob Aghassy, Ph.D., Hebrew University, 1967, Associate Professor—physical, field methods, Middle East

Chiao-min Hsieh, Ph.D., Syracuse, 1953, Professor—cultural, East Asia

Karel J. Kansky, Ph.D., Chicago, 1963, Professor—transportation, research methodology, cartography

Hibberd V. B. Kline, Jr., Ph.D., Wisconsin, 1941, Professor and Chairman—physical, Africa, cartography, air photo interpretation/remote sensing

Leonard I. Kuntz, Ph.D., Louisiana State, 1970, Associate Professor—urban

Oswald Schmidt, M.Ed., Pennsylvania State, 1940, Emeritus —population, South Asia

William J. Smole, Ph.D., Chicago, 1964, Professor—cultural, Latin America

Arthur Viterito, Ph.D., Denver, 1980, Assistant Professor—climatology, quantitative methods, environmental, remote sensing

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

el Harram, Fathi. "Stream Morphometry and Point Bar Evolution," 1979.* Mf., Univ. Microfilms.

Luedde, David M. "A Geographical Analysis of Quality of Life in Allegheny County: 1970," 1980.* Mf., Univ. Microfilms.

Thomson, Robert D. "Mining of Mineral Aggregates in Urban Areas," 1980.* Mf., Univ. Microfilms.

Master's:

Ham, Marilyn P. "An Analysis of Nineteenth Century Abandoned Settlements in Allegheny County, Pennsylvania," 1980.

Mouyard, Margaret M. "The Effects of Slope Characteristics and Time Upon Rill and Gully Development on Reclaimed Strip-Mined Land," 1979.

Portland State University

GEOGRAPHY DEPARTMENT

DATE FOUNDED: 1959 GRADUATE PROGRAM FOUNDED: 1969

DEGREES OFFERED: M.A., M.S., M.A.T., M.S.T.

GRANTED 7/1/79-6/30/80: 2

GRADUATE STUDENTS IN RESIDENCE: 16
NOT IN RESIDENCE: 16

HEAD: D. Richard Lycan

FOR FURTHER INFORMATION WRITE TO: Geography Department, Portland State University, P.O. Box 751, Portland, Oregon 97207
Telephone (503) 229-3916

PROGRAMS AND RESEARCH FACILITIES: The Geography Department offers the degrees of Master of Arts, Master of Science, Master of Arts in Teaching, and Master of Science in Teaching. In addition to general pre-doctoral study, other programs are offered for students who intend to enter the fields of urban and regional planning, environmental policy formulation, and natural resources management.

The M.A.T. and M.S.T. degrees offer advanced training for high school teachers of geography and social studies.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: For admission to graduate study a student normally should have completed the minimum preparation for an undergraduate major in geography with a 3.0 average in all upper division work, in addition to meeting University admission requirements. Students with majors in other fields are encouraged, if they can demonstrate ability, to pursue graduate work in geography. Applicants are requested to submit scores for both the aptitude and the advanced geography sections of the Graduate Record Examination and the names and addresses of three faculty members of colleges previously attended or persons who can be contacted by the Geography Department for recommendations. Applicants for whom English is a second language are required to present a minimum TOEFL score of 550.

The student will plan a program of study with an adviser during the first term of residence which must include a minimum of 30 graduate-credit term hours in geography, of which at least 15 hours must be in 500-level courses, including the following three seminars: Proseminar in Geography, Geographic Thought and Literature, and Research Design. All graduate students are required to attend the department's non-credit colloquia.

After a student has completed at least 12 credits in residence in geography with an average grade of B or higher and has satisfied any deficiencies noted at the the time of admission, the student is eligible to take the required comprehensive examination, which is provided and graded by the student's committee. If failed, the student may be allowed to retake portions of the examination or may be advised to take additional course work. Students seeking the M.A. degree must demonstrate their competence in the use of a foreign language for geographic research; those preparing for an M.S. degree must show proficiency in advanced quantitative methods in geography or an equivalent research technique. Upon successful completion of the comprehensive examination and successful demonstration of the required competence, the student is advanced to candidacy.

Students in the M.A. program must complete a thesis. Those in the M.S. program may choose between thesis and non-thesis options. The thesis option is appropriate for students intending to pursue Ph.D. studies, whereas the non-thesis option is designed for students who are preparing for careers in such areas as government service or private industry. Candidates who elect to write a thesis take a minimum of 45 credits including 6 credits in Geog. 503 Thesis. The thesis option requires the presentation of the student's independent research into a topic approved by the student's graduate committee. It normally involves field work and is an original contribution to knowledge in the field of geography.

Candidates electing the non-thesis option take a minimum of 54 credits including the presentation of a research paper. The M.S. research paper is normally the outgrowth of a geography seminar, in which case up to 3 credits may be taken in Geog. 501 Research. The research paper is submitted to the student's graduate committee. A final oral examination by the student's committee includes defense of the thesis or research paper.

STAFF:

James G. Ashbaugh, Ph.D., UCLA—urban, North America, Pacific Northwest
Clarke H. Brooke, Jr., Ph.D., Nebraska—human, ecosystems conservation, Middle East
Dale E. Courtney, Ph.D., Washington—historical, Latin America
John O. Dart, Ph.D., Washington—geomorphology, conservation
Alexander R. Gassaway, Ph.D., Clark—economic, Europe (on leave 1980–81)
Daniel M. Johnson, Ph.D., Arizona State—climatology, hydrology
Fritz L. Kramer, Ph.D., UC, Berkeley—cartography, historical, cultural
D. R. Lycan, Ph.D., Washington—demography, cartography, quantitative methods
Thomas M. Poulsen, Ph.D., Wisconsin—U.S.S.R., Eastern Europe, world affairs

Larry W. Price, Ph.D., Illinois—biogeography, geomorphology, Arctic/alpine
Willert Rhynsburger, Ph.D., Washington—urban systems, East and Southeast Asia

University of Rhode Island

DEPARTMENT OF GEOGRAPHY AND MARINE AFFAIRS

DATE FOUNDED: 1962 GRADUATE PROGRAM FOUNDED: 1967
GRADUATE PROGRAM IN MARINE AFFAIRS
FOUNDED: 1969

DEGREES OFFERED: M.A. (Geography), Master of Marine Affairs (M.M.A.),
Master of Arts in Marine Affairs (M.A.M.A.)

GRANTED 7/1/79–6/30/80: 3 M.A., 18 M.M.A., 6 M.A.M.A.

GRADUATE STUDENTS IN RESIDENCE: 5 M.A., 25 M.M.A., 22 M.A.M.A.
NOT IN RESIDENCE: 4 M.A., 4 M.M.A., 10 M.A.M.A.

CHAIRMAN: Lewis M. Alexander

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Prof. Lewis M. Alexander, Chairman, Department of Geography and Marine Affairs, University of Rhode Island, Kingston, Rhode Island 02881
Telephone (401) 792-2596

PROGRAMS AND RESEARCH FACILITIES: The department currently offers three master's degrees in two tracks: the two-year master's degree in geography (M.A.), and a two-year master's degree in marine affairs (M.A.M.A.). Both degrees require the completion of a thesis. In addition a one-year master of marine affairs degree (M.M.A.) is offered to persons with prior experience in marine-related affairs, a requirement that can be satisfied by at least five years of practical experience in a marine-related field. In geography the following competencies are offered by the faculty: (1) political geography with special reference to the North American, North Atlantic, European, and Southeast Asian regions; (2) urban geography, especially as related to land utilization of the urban and suburban environment; (3) environmental assessment and impact analysis; (4) applied meteorology and climatology; (5) economic geography and location analysis; (6) cartography; and (7) quantitative methods. Within marine affairs the following courses or areas of concentration are offered: (1) coastal zone law and usage; (2) port and marine transportation geography; (3) marine geography, including aspects of exploitation and control in the coastal zone and deep ocean; (4) geography of island systems; (5) marine recreation; and (6) fisheries and maritime law.

Research facilities include the University's IBM 370/155 computer, Broomall M2000 Plotter, and Alden 9271 weather facsimile recorder. In addition specialty libraries in marine affairs, fisheries, and coastal zone regional information centers are available. The Claiborne Pell Marine Science Library at the nearby Narragansett Bay Campus was designated the National Sea Grant Depository in 1971.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. M.A. in geography requires a minimum of 30 credits, including six for thesis research; M.A. in marine affairs requires 42 credits, including six for thesis research; and the Master of Marine Affairs requires 30 credits and a major paper. Admission requirements: for the M.A. in geography, equivalent of 27 credits in geography or allied fields; M.A. in marine affairs, graduation from an accredited college; and Master of Marine Affairs, five years experience in marine areas or completed advanced degree in marine related fields. Graduate assistantships range from approximately $3600 to $4000 and tuition and fees are remitted for the academic year. NSF nominations submitted to Graduate School.

STAFF:

Lewis M. Alexander, Ph.D., Clark, 1949, Professor—political, marine, North America, North Atlantic Basin, Europe

Francis X. Cameron, J.D., Pittsburgh, 1971, Associate Professor—coastal zone law, fisheries law and management

James M. Havens, Ph.D., London, 1969, Associate Professor and State Climatologist—meteorology, climatology

Gerald H. Krausse, Ph.D., Pittsburgh, 1975, Assistant Professor—cartography, cultural and urban geography, Southeast Asia

Aloys A. Michel, Ph.D., Columbia, 1959, Professor and Dean, Graduate School—Europe, Soviet Union, South Asia

Dennis W. Nixon, J.D., Cincinnati, 1975, Assistant Professor—international marine law, maritime institutions

Niels West, Ph.D., Rutgers, 1973, Associate Professor—coastal environmental use and planning, environmental impact analysis, marine recreation, quantitative methods

One position to be filled in marine transportation and port geography.

TITLES OF THESES COMPLETED 7/1/78–6/30/80:

Master of Arts in Geography:

Gordon, Wiliam R. "The Perception of Coastal Storm Hazards of Inhabitants of Selected Rhode Island Area Beaches," 1980.*

Marx, Peter J. "The Attitudes and Perceptions of Rod and Reel Fishermen: An Analysis of Rhode Island Striped Bass Fishermen," 1980.*

Schweid, David W. "A Barge Feeder Service for Containerized Cargo, Part of a Regional System," 1980.*

Master of Arts in Marine Affairs:

Brillat, Thomas. "A Proposal for the Conducting of International Marine Scientific Research within the Exclusive Economic Zone of Coastal States," 1978.*

Eleyi, Elias. "Seamen's Welfare Agencies in the Ports of Nigeria," 1980.*

Gold, Jonathan. "Administration of Coastal Wetlands in Rhode Island," 1979.*

Knapp, Connie. "Science vs. Law and Decision Making: A Case Study of Selected Problems in Accessing the Available Scientific Information to Rhode Island's Coastal Zone Managers," 1979.*

Starr, Carder. "Feasibility of Processing Herring Aboard Vessels in the United States 200-mile Economic Zone," 1980.*

Tache, Simon. "Towards the Creation of a World Ocean Management Authority to Meet the Challenge of the Utilization of the Oceans and Ocean Resources," 1979.*

Rutgers University

GRADUATE PROGRAM IN GEOGRAPHY

DATE FOUNDED: 1956

DEGREES OFFERED: M.A., M.S., M.Phil., Ph.D.

GRANTED 7/1/79-6/30/80: 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 31 Masters 11 Ph.D.
NOT IN RESIDENCE: 7 Masters 7 Ph.D.

DIRECTOR: James K. Mitchell

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director,
Graduate Program in Geography, Department of Geography, Rutgers College,
Rutgers University, New Brunswick, New Jersey 08903
Telephone (201) 932-7809

PROGRAMS AND RESEARCH FACILITIES: The Rutgers program is characterized by varied course offerings, rich faculty resources, strong interdisciplinary ties, access to unrivalled research opportunities and facilities, and firm links with policy management agencies in state and federal governments. It is also the largest and most comprehensive geography graduate program in the New York and Philadelphia metropolitan regions.

Faculty currently work in such areas as urban water resource management, hazards research, environmental planning and decision making, coastal geomorphology and coastal zone management, regional development, human ecology, perception of urban environments, processes of urbanization, medical, behavioral, historical, cultural, and social geography. Faculty and students contribute to the *Rutgers Geography Discussion Papers* series. Several titles are published each year.

Students can pursue courses of study based on a flexible combination of required and elective courses. Close ties are maintained with the Center for Coastal and Environmental Studies, Center for Urban Policy Research, Agricultural Experiment Station, and a variety of interdisciplinary departments and programs throughout the University.

Rutgers is convenient to several of the country's largest research libraries and to a vast range of research and funding institutions and public agencies. Batch processing and timesharing are provided through an IBM 360/67 computer.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Teaching assistantships with full remission of tuition are available.

The stipend is approximately $5500. Similar compensation is provided by several research assistantships. University fellowships and tuition scholarships are also available. Outstanding students are eligible to compete for a departmental academic prize.

STAFF AND ASSOCIATES:

Baruch Boxer, Ph.D., Chicago, 1961, Professor—international environmental issues, China

John E. Brush, Ph.D., Wisconsin, 1952, Professor—population and settlement, South Asia

George W. Carey, Ed.D., Columbia, 1964, Professor—urban, social ecology

Thomas A. Clark, Ph.D., Iowa, 1975, Assistant Professor—urban planning, regional development

Susan Caris Cutter, Ph.D., Chicago, 1976, Assistant Professor—environmental management, community attitudes toward pollution

Wilbert M. Gesler, Ph.D., North Carolina, 1977, Assistant Professor—rural land use, health care delivery systems

William Goldfarb, J.D., Yale, 1962, Ph.D., Columbia, 1974, Associate Professor—environmental law, water resources

Michael R. Greenberg, Ph.D., Columbia, 1969, Professor—regional economic development, quantitative methods, environmental management

William Hamilton, Ph.D. (pending), Oregon State, 1980, Assistant Professor—cartography, computer mapping, remote sensing

Briavel Holcomb, Ph.D., Colorado, 1972, Associate Professor—urban, social, perception

Robert M. Hordon, Ph.D., Columbia, 1970, Associate Professor—fluvial geomorphology and hydrology

Robert W. Lake, Ph.D. candidate, Chicago, Assistant Research Professor—urban and social

James K.Mitchell, Ph.D., Chicago, 1973, Associate Professor—resource management, coastal and marine geography, human response to hazard

George H. Nieswand, Ph.D., Rutgers, 1970, Professor—environmental management and planning, systems analysis

Karl F. Nordstrom, Ph.D., Rutgers, 1975, Associate Professor—beach process analysis, coastal land use and shoreline development

Norbert P. Psuty, Ph.D., Louisiana State, 1966, Professor—physical, coastal landforms, remote sensing

William H. Renwick, Ph.D., Clark, 1979, Assistant Professor—fluvial geomorphology, environmental geomorphology, applied climatology

Robert W. Roundy, Ph.D., UCLA, 1976, Assistant Professor—medical geography, environment and development in the Third World, human ecology

Andrew P. Vayda, Ph.D., Columbia, 1956, Professor—human ecology, economic development and environmental problems

Peter O. Wacker, Ph.D., Louisiana State, 1966, Professor—historical, cultural, Anglo-America

Grant F. Walton, Ph.D., Rutgers, 1973, Professor—pedology, natural resource planning

To be named: one additional position in urban-economic geography, July 1980.

TITLES OF DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Ziegenfus, Robert C. "Municipal Natural Resource Inventories: An Analysis and Suggested Methodology," 1980.

San Diego State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1914 GRADUATE PROGRAM FOUNDED: 1956

DEGREES OFFERED: M.A.

GRANTED 7/1/79-6/30/80: 6

GRADUATE STUDENTS IN RESIDENCE: 53
NOT IN RESIDENCE: 7

CHAIRMAN: Ernst C. Griffin

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. E. A. Keen,
Graduate Advisor, Department of Geography, San Diego State University, San
Diego, California 92182
Telephone (714) 265-5437

PROGRAMS AND RESEARCH FACILITIES: A flexible curriculum complemented by careful advising permits the department to design a program tailored to the professional goals of each M.A. candidate. Students also benefit from a favorable learning situation created by a long tradition of close faculty-student contact.

Although a wide variety of teaching specialties is represented in the department, the large size of the staff has made it possible to concentrate in the following subdivisions of the field: (a) conservation and environmental studies; (b) urban and transportation geography; (c) cartography and remote sensing; (d) geomorphology; (e) Latin America. Graduate students are urged to study in one or more of the above concentrations. A strong applied program is available leading to positions chiefly in categories (a) and (b) above.

Geography, which is housed on the second floor of the Social Science Building, is provided with excellent physical facilities. In addition to well-equipped classrooms and lecture hall, the department has a cartographic laboratory, field and photogrammetric equipment, graduate assistant offices, a class "A" weather station, a reading room, and an excellent map collection of approximately 100,000 sheets. Geography cooperates in a Social Science Research Center with Sociology and Economics, with terminals to on-campus computer facilities as well as access to the California state university and colleges' large-capacity computer.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Two Master of Arts degree plans are available: one which requires a thesis, and a sec-

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ond which requires two research papers. Limited assistantships are available for qualified students on a competitive basis. Semester System.

STAFF:

James D. Blick, Ph.D., UCLA, 1956, Associate Professor—California, Europe
Albert A. Colombo, M.A., San Diego State, 1963, Assistant Professor—political, cultural
Donald I. Eidemiller, Ph.D., Indiana, 1956, Professor—climatology, meteorology
Willam A. Finch, Jr., Ph.D., Illinois, 1964, Professor—field methods, physical, remote sensing
Larry R. Ford, Ph.D., Oregon, 1970, Professor—urban, urban design, cultural
Barbara E. Fredrich, Ph.D., UCLA, 1975, Associate Professor—Latin America, vegetation, cultural
Ned H. Greenwood, Ph.D., Ohio State, 1963, Professor—soils, environment, human ecology
Ernst C. Griffin, Ph.D., Michigan State, 1972, Professor—Latin America, cultural
Harvey E. Heiges, Ph.D., Washington, 1968, Professor—urban, spatial interaction, urban transportation, industrial
Warren A. Johnson, Ph.D., Michigan, 1969, Professor—natural resources, cultural
Elmer A. Keen, Ph.D., Washington, 1965, Professor—economic, marine resources, East Asia
E. J. Conrad Kiewiet de Jonge, Ph.D., Clark, 1951, Professor—climatic and structural geomorphology, air photo interpretation, history of geography
David S. McArthur, Ph.D., Louisiana State, 1969, Associate Professor—physical, coastal and fluvial geomorphology, quantitative methods
Bob R. O'Brien, Ph.D., Washington, 1965, Professor—conservation, outdoor recreation
Philip R. Pryde, Ph.D., Washington, 1969, Professor—environmental quality, water resources, Soviet Union
Imre E. Quastler, Ph.D., Kansas, 1971, Professor—transportation, urban
Frederick P. Stutz, Ph.D., Michigan State, 1970, Professor—transportation analysis, urban systems, quantitative methods, computer applications
Richard D. Wright, Ph.D., Kansas, 1967, Professor—cartography, map analysis
Charles C. Yahr, Ph.D. Illinois, 1956, Professor—cultural, South and Southeast Asia, United States

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Englehorn, Curtis Scott. "A Monitoring Program for the San Elijo Lagoon East Basin Water Management Plan," 1979.* Mf., Univ. Microfilms.

Kunkel, Steven Douglas. "Crop Identification in the Imperial Valley Utilizing Landsat Digital Data," 1979.* Mf., Univ. Microfilms.

Mathewson, James Arthur. "The Yuma Desalting Project: An Energy and Policy Analysis," 1979.* Mf., Univ. Microfilms.

Prescott, Dennis Arthur. "Case Studies of Recreational Access in the San Diego Coastal Region," 1979.* Mf., Univ. Microfilms.

White, Thomas C. "Determination of Least Social Cost Corridors in Chaparral Land Management Planning," 1979. Mf., Univ. Microfilms.

Willens, Constance Ann. "A Determination of Boundaries for Los Penasquitos Canyon Regional Park Based on Environmental Factors," 1979.* Mf., Univ. Microfilms.

San Francisco State University

DEPARTMENT OF GEOGRAPHY AND HUMAN ENVIRONMENTAL STUDIES

DATE FOUNDED: 1937 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A.

GRANTED 7/1/79-6/30/80: 6

GRADUATE STUDENTS IN RESIDENCE: 33
NOT IN RESIDENCE: 37

CHAIRPERSON: Roger Crawford

FOR FURTHER INFORMATION WRITE TO: Steven R. Pease, Graduate Advisor, Department of Geography and Environmental Studies, San Francisco State University, 1600 Holloway Avenue, San Francisco, California 94132
Telephone (415) 469-2049

PROGRAMS AND RESEARCH FACILITIES: The M.A. program is directed toward a broad base of knowledge in geography. The department has an interest in meeting the needs of planners, cartographers, and professional geographers as well as those intending doctoral studies. Opportunities to do concentrated work do exist, particularly in several sub-fields: regional planning, environmental studies, geographic techniques, physical, regional, cultural-historic, and urban-economic. Research facilities include a photocartographic laboratory, a map library, access to the college computer center and environmental field stations.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. Completion of a minimum 30 units of work in geography including four graduate seminars and a Master's thesis or examination option; no foreign language requirement. Individualized programs reflecting the interests and career goals of each student are developed insofar as faculty with those interests are available. A minimum of 3 semesters needed for completion of course work; limited summer program. Admission requirements—15 undergraduate semester hours in geography with B average for last two academic years (deficiencies in undergraduate program to be made up without counting toward required graduate hours); three letters of recommendation. Only a few assistantships are available for advanced students already in residence.

STAFF:

Rene W. Barendregt, Ph.D., Queen's, 1977, Lecturer—landform geography, water resources, environmental studies

Roger J. Crawford, Ph.D., Washington, 1969, Associate Professor—regional planning, environmental impact and design, urban transportation

Burton L. Gordon, Ph.D., UC, Berkeley, 1954, Professor—field study, biogeography, Europe

Richard F. Hough, Ph.D., Wisconsin, 1963, Professor—cultural, Japan, field study

Max C. Kirkeberg, M.S., Wisconsin, 1961, Assistant Professor—geographic education, cultural, San Francisco, Africa

Hans-J. Meihoefer, Ph.D., Washington, 1968, Professor—geographic methodology, environmental management, agriculture

Steven R. Pease, Ph.D., Wisconsin, 1977, Assistant Professor—climatology-meteorology, physical, environmental problems, remote sensing

Robert D. Picker, Ph.D., Washington, 1962, Professor—economic, environmental management, U.S.S.R.

Georg Treichel, M.A., UC, Berkeley, 1969, Associate Professor—biogeography, environmental studies, human ecology, transportation

Jean Vance, Ph.D., Clark, 1958, Professor—urban, cultural

John E. Westfall, Ph.D., George Washington, 1968, Professor—historical, quantitative, computer applications, population

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Bell, Franklin J. "Geographic Aspects of Honeybee Pollination of California Vegetable Crops," 1980.*

Minuth, Glenn Robert. "A Geomorphometric Analysis of Mound Microrelief on the Mehrten Formation near Sacramento in Placer County, California," 1979.*

Roberto, Karlena Palomares. "The Geography of Crime in San Francisco: As Perceived and as Reported," 1979.*

Smith, Edwina Regina. "The California Ground Squirrel (*Spermophilus Beecheyi*) Natural History and Control Policies with Economic and Ecological Ramifications," 1979.*

Tripp, Michael William. "The Russians in San Francisco," 1980.*

Viollis, Frank Salvatore. "The Evolution of Pescadero Marsh," 1979.*

San José State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A.

GRANTED 7/1/79-6/30/80: 7

GRADUATE STUDENTS IN RESIDENCE: 40
NOT IN RESIDENCE: 10

CHAIRMAN: Richard A. Ellefsen

FOR CATALOG AND FURTHER INFORMATION WRITE TO: M. P. McIntyre, Graduate Coordinator, Department of Geography, San Jose State University, Washington Square, San Jose, California 95192
Telephone: (408) 277-3463

PROGRAM AND RESEARCH FACILITIES: The program comprises advanced studies in a required core and specialization in a selected field. The region of interest or the topic of research specialization, consonant with faculty interests and university resources, is broadly framed to provide flexibility in developing the candidate's study focus. Several areas of concentration within geography may be selected. However, the candidates choosing an emphasis in land-use analysis and mapping based on both conventional and remotely sensed imagery find their work facilitated by the department's well-equipped laboratory which features an electronic density slicer, an electronic planimeter/digitizer, a zoom transfer scope, a zoom stereoscope, a copy camera, and numerous cartographic devices. A few graduate students regularly work on funded land-use projects.

ACADEMIC PLAN AND ADMISSION REQUIREMENTS: The program, containing a thesis and a non-thesis option, consists of 30 semester units, the equivalent of one full academic year. Minimal university admission requirement is a 2.5 grade average. Generally there are no financial aids. Semester system.

STAFF:

Richard A. Ellefsen, Ph.D., UC, Berkeley, 1968, Professor—urban, land use, remote sensing, California, India

Allan R. Fishman, Ph.D., Illinois, 1971, Associate Professor—economic, conservation, Anglo-America, Europe

Michael P. McIntyre, Ph.D., Ohio State, 1951, Professor—physical, economic, Pacific, Far East, national parks

Duilio Peruzzi, Ph.D., Michigan, 1963, Professor—cartography, remote sensing, land use, Europe

Lester B. Rowntree, Ph.D., Oregon, 1971, Associate Professor—cultural, urban, California, research methods

David E. Schwarz, Ph.D., Kansas, 1976, Associate Professor—remote sensing, cartography, human

Raymond W. Stanley, Ph.D., UCLA, 1954, Professor—political, geographic thought, Latin America, California

Bill H. Takizawa, Ph.D., Illinois, 1971, Associate Professor—economic, natural resources, cartography, East Asia

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Coffland, Alvin Bruce. "Three Dimensional Urban Morphology: An Initial Inquiry in San Francisco," 1979.

Dillon, David. "Elderly and Handicapped Integration and Enrichment in San José," 1980.

Raburn, Robert Alan. "Urban Surfaces and Storm Runoff: A Surficial Examination of Castro Valley, California," 1979.

University of South Carolina

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1963 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A., M.S., M.A.T.

GRANTED 7/1/79–6/30/80: 4 Masters

GRADUATE STUDENTS IN RESIDENCE: 16
NOT IN RESIDENCE: 18

CHAIRMAN: Julian V. Minghi

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director of Graduate Studies, Department of Geography, University of South Carolina, Columbia, South Carolina 29208
Telephone (803) 777–5236

PROGRAMS AND RESEARCH FACILITIES: The department offers graduate programs in geography leading to the Master of Arts, Master of Science, and Master of Arts in Teaching degrees. The M.A. and M.S. programs are designed to prepare students for further graduate study and for employment in such areas as planning, business, government service, and teaching. The M.A.T. program, offered in cooperation with the College of Education, prepares students to teach in the public schools or to pursue further graduate study in the teaching field and in professional education.

The department offers training in fundamental geographic skills and the opportunity for advanced study and research in a variety of fields. Coursework clusters reflecting faculty interest and competency include: physical geography and resources; urban, economic, and applied geography; historical, cultural, and political geography, and the history of geography; geographic techniques and methods; regional geography (Europe, North America; and Latin America); and environmental preception and behavioral geography.

Research facilities in the department's air conditioned quarters include a well-equipped cartographic-photographic laboratory run by a full-time graphics supervisor; an area-analysis laboratory; and a map-air photo depository (including 145,000 sheet maps, 1,000 atlases, and over 40,000 air photos) administered by a full-time map librarian. The department maintains a weather station on campus and has comprehensive files of meteorological data including computer tape records. The University library, a member of the select Association of Research Libraries, contains more than 3 million processed volumes.

The department has excellent facilities for data analysis and computer oriented projects. These include several electronic calculators, a Graf-pen digitizer, keypunch, Tektronix 4013 graphics terminal and CRT terminal. Access to the main university computer (Amdahl V6–II) is readily available through terminals in the department and in the Social and Behavioral Sciences Lab. A vast set of statistical and computer mapping software is available on the system. The department employs a systems analyst and has access to programming and consulting services in the Social and Behavioral Sciences Lab.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* The degree programs require a minimum of 30 semester hours of graduate work. Small, informal classes and seminars offer students the chance to work closely with the faculty, while flexible program requirements offer the opportunity to take related work in other University departments. Specialization in the M.A. and M.S. programs is attained through the writing of a thesis in addition to at least 24 semester hours of coursework. Knowledge of a foreign language is not required unless a student intends to do field work abroad. The M.A.T. program concentrates on coursework and requires neither a thesis nor a foreign language proficiency. M.A.T. students normally take from 6 to 15 credits in professional education and from 15 to 24 credits in geography. Master's degree students may accelerate their progess by taking advantage of the two summer sessions offered each year. Each summer the department sponsors a field trip in the Southeast for entering students. *Admission Requirements:* Applications are welcome at any time, and students may matriculate at the beginning of any semester or summer session. In support of any application, a student is required to submit official transcripts of all previous study, Graduate Record Examination scores, two letters of recommendation, and a brief written statement describing career objectives and probable specialties. M.A.T. program applicants may elect to submit scores on the National Teachers Examination (NTE) in lieu of the GRE. The Department does not require an applicant to have an undergraduate major in geography; rather it requires evidence of general intellectual ability. *Financial Aid:* Graduate assistantships carry stipends of at least $3600 for approximately 14 hours per week for the academic year, and include a waiver of general tuition fees, which represents a saving of $366 per semester for residents and $846 per semester for non-residents. A limited number of summer assistantships ($500 per session) are also available. Course fees are currently $100 per semester for half-time assistants and $200 per semester for quarter-time assistants. The normal deadline for Fall semester assistantship applications is March 15; the corresponding deadline for Spring semester applications is December 10.

STAFF:

Allen D. Bushong, Ph.D., Florida, 1961, Associate Professor—history of geography, source materials, cultural, Middle America

David J. Cowen, Ph.D., Ohio State, 1971, Associate Professor—economic, locational analysis, quantitative

J. Ronald Eyton, Ph.D., Illinois, 1975, Associate Professor—remote sensing, photo interpretation, quantitative methods

John F. Jakubs, Ph.D., Ohio State, 1974, Assistant Professor—urban, social, housing, quantitative methods

Robert L. Janiskee, Ph.D., Illinois, 1974, Assistant Professor—recreation, resources, environment, futures

David M. Jones, Ph.D., Michigan State, 1975, Assistant Professor—economic-agricultural, South America

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Charles F. Kovacik, Ph.D., Michigan State, 1970, Assistant Professor—historical, human, North America

Robert E. Lloyd, Ph.D., Pennsylvania State, 1974, Associate Professor—behavioral, quantitative methods, urban

Paul E. Lovingood, Jr., Ph.D., North Carolina, 1962, Professor—migration, recreation, computer graphics

Julian V. Minghi, Ph.D., Washington, 1962, Professor—political, Europe

Lisle S. Mitchell, Ph.D., Ohio State, 1967, Professor—urban-economic, recreation

John C. Purvis (part-time), M.S., South Carolina, 1969, Teaching Associate—meteorology

Anthony Sas, Ph.D., Clark, 1956, Associate Professor—political-military, Europe, Southeast Asia

Richard G. Silvernail, Ph.D., North Carolina, 1960, Professor—resources, geographic education, small area analysis

William R. Stanley, Ph.D., Pittsburgh, 1966, Professor—transportation, political, developing regions

Theodore R. Steinke, Ph.D., Kansas, 1979, Assistant Professor—cartography

John J. Winberry, Ph.D., Louisiana State, 1971, Associate Professor—cultural-historical, Mexico

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Lewis, Carolyn B. "The Biography of a Neglected Classic: Ellen Churchill Semple's *The Geography of the Mediterranean Region,*" 1979.

Maletic, Ann Marie. "Environmental Goals Related to Balance Theory," 1980.

Morrison, Bruce. "The Influence of the Railroad Upon the Rural Settlement Landscape of Sumter County, South Carolina: 1848–1978," 1980.

South Dakota State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1967 GRADUATE PROGRAM FOUNDED: 1974

DEGREES OFFERED: M.S.

GRANTED 7/1/79–6/30/80: 2

GRADUATE STUDENTS IN RESIDENCE: 25
NOT IN RESIDENCE: 8

HEAD: Edward Patrick Hogan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Edward Patrick Hogan, Head, Department of Geography, South Dakota State University, Brookings, South Dakota 57007
Telephone (605) 688-4511

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers graduate students the opportunity to earn the Master of Science degree. The graduate curriculum is organized through formal courses, seminars, internship experiences and supervised research. Special programs can be taken through a cooperative program with the EROS Data Center. Internships are available with planning districts, governmental agencies and business and industry. The Department of Geography is housed in new facilities in Scobey Hall. The H.M. Briggs Library contains the largest geography collection in the state. The South Dakota State University Research and Data Processing Center, the Remote Sensing Institute and the Institute of Social Science for Rural and Urban Planning offer related facilities to benefit the student.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: A minimum of thirty semester credits (30) are required for the Master's degree, of which at least 17 must be earned in the major. The thesis accounts for 6 of these credits. Financial aid includes several Graduate Teaching Assistantships.

STAFF:

Orville Gab, M.S., South Dakota State, 1979, Instructor—cartography, physical

Charles F. Gritzner, Ph.D., Louisiana State, 1969, Professor—cultural, world, geographic education

Janet H. Gritzner, Ph.D., Louisiana State, 1978, Assistant Professor—cultural, remote sensing, anthropology

Edward Patrick Hogan, Ph.D., Saint Louis, 1969, Professor and Associate Dean—South Dakota, human, research, industrial

Gary E. Johnson, Ph.D., Indiana State, 1974, Professor—remote sensing, natural resources, planning

Glenn Landis, M.F., Pennsylvania State, 1954, Professor—remote sensing, photogrammetry, forestry

Donald G. Moore, Ph.D., South Dakota State, 1972, Associate Professor—soil, remote sensing

Lee A. Opheim, Ph.D., Saint Louis, 1971, Professor—physical, cartography, historical

Robert G. Reeves, Ph.D., Stanford, Professor—remote sensing, mineral, regional

Larry D. Roberts, M.A., Oklahoma State, 1977, Assistant Professor—historical, human, political, remote sensing

John A. Rorabacher, Ph.D., Minnesota, 1978, Assistant Professor—human, historical, developing nations

Maynard L. Samuelson, M.A., North Dakota, 1965, D.A. Candidate, Northern Colorado, Assistant Professor—planning, economic, industrial, regional

Roger K. Sandness, M.S., North Dakota, 1968, Ph.D. Candidate, Iowa

Arthur Wilner, Ph.D., Michigan, 1973, Associate Professor—planning

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Eidenshink, Jeffery. "Geographical Information System Inputs to Model Implementation Program for Water Quality Improvement," 1979.

Hill, Loren G. "A Trade Area Study of Kadoka, South Dakota," 1979.

Southern Illinois University—Carbondale

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1936 GRADUATE PROGRAM FOUNDED: 1949

DEGREES OFFERED: M.A., M.S., M.S.Ed., Ph.D.

GRANTED 7/1/79–6/30/80: 1 Masters 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 10 Masters 14 Ph.D.
NOT IN RESIDENCE: 2 Masters 4 Ph.D.

CHAIRMAN: David M. Sharpe

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Secretary, Department of Geography, Southern Illinois University, Carbondale, Illinois 62901
Telephone (618) 536–3375

PROGRAMS AND RESEARCH FACILITIES: The Geography Department offers Masters' and Ph.D. degrees with concentrations in PHYSICAL-ENVIRONMENTAL SYSTEMS (energy and moisture concepts as they affect local hydrology, soils, natural vegetation, agriculture and landforms); NATURAL RESOURCES MANAGEMENT (the role of resources in economic development and regional planning from a physical, technological, social, economic, and geographical viewpoint; public policy choices for land, air, and water quality management); and URBAN AND REGIONAL PLANNING (the role of demographic, socioeconomic, political, and historical phenomena as they affect spatial policies for urban and regional organization; public and private resource-allocation criteria, planning agency structure and philosophy). Courses dealing with research techniques include the management of spatial data bases, elementary and multivariate statistical models, specialized computer mapping, forecasting methodologies, and principles of research. The graduate program is based upon an interdisciplinary problem-solving perspective and major linkages exist within the university with many other departments

The department is housed in the College of Liberal Arts close to the university's main library and the two I/O areas of our IBM 370/158 System. Interactive computing facilities and a computer programmer are also present in the department and computer digitizing facilities are available. Fully equipped cartographic and climatological laboratories are maintained by the Geography Department. The university library is one of the largest in North America with over 1.8 milion volumes and over 100,000 flat maps served by a full-time librarian.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: All graduate applicants must request application forms for admission. These must be completed and returned to the department by February 15 to ensure consideration for admission and financial support for the Fall semester. Application includes letters of recommendation, transcripts, and a statement of professional goals. All applicants are requested to take the Graduate Record Exams (GRE's) and submit these with their applications. Every applicant is considered for financial assistance and is notified by April 15 of the department decision. Financial awards include teaching assistantships, research assistantships, and University fellowships.

STAFF:

David G. Arey, Ph.D., Clark, 1968, Associate Professor—environmental planning, air quality, land use management

Duane D. Baumann, Ph.D., Clark, 1967, Professor—resource management, environmental perception, natural hazards, water resources planning

Ronald I. Beazley, Ph.D., Purdue, 1953, Professor—economics in geography, resource allocation, planning, public expenditure and projects, quantitative analysis

John J. Boland, Ph.D., Johns Hopkins, 1973, Adjunct Associate Professor—environmental economics, water resources management, public policy analysis

David E. Christensen, Ph.D., Chicago, 1956, Professor—urban and regional planning, cartography, planning theory, citizen participation in planning

John F. Dwyer, Ph.D., S.U.N.Y. College of Environmental Sciences and Forestry, 1975, Adjunct Associate Professor—urban recreation planning, forest recreation, forest economics

A. Doyne Horsley, Ph.D., Southern Illinois, 1974, Assistant Professor—environmental psychology, affective education, inconsistencies between attitudes and behavior toward environment

Daniel Irwin, Ph.D., Syracuse, 1972, Associate Professor—cartography, computer graphics, terrain representation in American cartography

David L. Jones, Ph.D., Pennsylvania State, 1960, Professor—meteorology, earth and environmental sciences; solar, ocean, and alternate energy planning

Stanley R. Lieber, Ph.D., Iowa, 1974, Associate Professor—behavioral and spatial analysis, recreation planning, population patterns, quantitative methods

David M. Sharpe, Ph.D., Southern Illinois, 1968, Associate Professor—climatology, biogeography, land use effects on the global carbon cycle, regional ecosystem analysis

John H. Sims, Ph.D., Chicago, 1964, Adjunct Professor—environmental perception, psychological responses to environmental hazards

*Faculty member to be appointed.

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Newcombe, Richard J. "Response to Tornado Warnings," 1980.* Mf., Univ. Microfilms.

Pongprayoon, Chatchai. "Determinants of Crop Choice: A Case Study of Farmers' Behavior in Kampaeng Saen Irrigation Project, Thailand," 1979.* Mf., Univ. Microfilms.

Master's:

McEwen, John H. "A Spatial Analysis of Total Suspended Particulate Air Quality in Jackson County, Illinois," 1980.*

Southern Illinois University—Edwardsville

DEPARTMENT OF EARTH SCIENCE, GEOGRAPHY AND PLANNING

DATE FOUNDED: 1957 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A. and M.S. in Geography, Master of City and Regional Planning

GRANTED 7/1/79–6/30/80: 12

GRADUATE STUDENTS IN RESIDENCE: 28
NOT IN RESIDENCE: 8

CHAIRPERSON: James G. Bridwell

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Department of Earth Science, Geography and Planning, Box 45, Southern Illinois University-Edwardsville, Edwardsville, Illinois 62026
Telephone (618) 692-3620

PROGRAMS AND RESEARCH FACILITIES: Because of an urban location and the demand for geographic specialists, the staff has designed Master's degrees in Geography, and in City and Regional Planning. Specialties in Regional and Economic Geography, Industrial Location, Urban Geography, Area Development, and Junior College Teaching are available.

The Master of Arts requires a thesis and one year of a foreign language. The Master of Science requires a thesis or two research papers and proficiency in quantitative techniques. Students may take either the 48-hour geography Masters or the 72 quarter-hour degree in urban planning. Internships are available. To date, research has centered on problems related to regional land use in the Greater St. Louis Area.

The department has a complete cartographic lab and design studio featuring new modern equipment. The department also has a computer workshop with six interactive terminals, three graphic display terminals, one flatbed plotter, and three decwriter terminals. There is also a complete design workshop containing all equipment for construction of three-dimensional models.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on the quarter system with out-of-state fees approximately $700 per quarter. Graduate admission requires a B average or better. An average of C plus permits conditional acceptance. Fellowships and teaching assistantships pay $1500 to $3500 per year plus tuition depending on assignments.

FULL-TIME AND PART-TIME STAFF:

Areas of staff specialty include four staff members in Earth Science, ten staff members in Geography, and seven staff members in Urban Planning. Six of the urban planners are APA members. Part-time staff are utilized to teach specialties in Earth Science and Planning.

Deipica Bagchi, Ph.D., Oregon State, Assistant Professor—resource geography

William B. Baker, Ph.D., Nebraska, Professor—cultural, historical geography

James G. Bridwell, M.A., Southern Illinois, Assistant Professor and Chairperson—conservation, meteorology

Donald W. Clements, Ph.D., Southern Illinois, Associate Professor—urban quantitative techniques

Robert P. Frost, Ph.D. candidate, Oklahoma, Instructor—physical geography

Dorothy J. Gore, Ph.D., Wisconsin, Associate Professor—engineering, geology

Charles F. Hess, Ph.D., Michigan State, Professor, APA—regional planning and water resources

Norman C. Johnsen, M.A., Syracuse, Assistant Professor, APA—planning administration

Alfred Kahn (part-time), M.S., Denver, Professor, APA—environmental planning

Harry B. Kircher, Ph.D., Clark, Professor—economic geography, conservation

Robert L. Koepke, Ph.D., Illinois, Professor—area development, industrial location

Fred A. Lampe, Ph.D., Kansas, Associate Professor—geographic techniques, educational geography, Europe

Carl S. Lossau, Ph.D., Northwestern, Professor, APA—urban and regional planning

Loran D. Marlow, Ph.D., Southern Illinois, Associate Professor—earth science

Robert E. Mendelson (part-time), M.U.P., Illinois, Associate Professor, APA—housing

Halsey W. Miller, Ph.D., Kansas, Professor—environmental and urban geology

Donald Strohmeyer, M.R.P., Kansas State, Associate Professor, APA—design and physical planning

Noble R. Thompson, Ph.D., Tennessee, Associate Professor—Latin America, cartography

Charles A. Thornton, Ph.D., Tennessee, Associate Professor—quantitative techniques, transportation planning

Ronald E. Yarbrough, Ph.D., Tennessee, Associate Professor—earth sciences, environmental impact

University of Southern Mississippi

DEPARTMENT OF GEOGRAPHY AND AREA DEVELOPMENT

DATE FOUNDED: 1912 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A., M.S. in Geography, M.S. in Economic Development

GRANTED 7/1/79-6/30/80: 1 Masters

GRADUATE STUDENTS IN RESIDENCE: 9 Masters
NOT IN RESIDENCE: 7 Masters

CHAIRMAN: Robert W. Wales

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FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Jesse O. McKee, Graduate Program Coordinator, Department of Geography and Area Development, S.S. Box 8468, University of Southern Mississippi, Hattiesburg, Mississippi 39401
Telephone (601) 266-7193

PROGRAMS AND RESEARCH FACILITIES: The department offers graduate programs leading to the Master of Arts and Master of Science in Geography and the Master of Science in Economic Development.

The degree programs in geography stress concentrations in atmospheric science, resources management, urban and regional planning, environmental planning, economic geography, population and cultural systems, and cartographic techniques balanced by staff specialties in a variety of other systematic and regional areas. All programs emphasize fieldwork, the application of technical skills, and the development of a research capability in a particular concentration of geography. All geography master's programs require a minimum of 36 credit hours—including thesis.

The program in Economic Development is offered jointly with the Mississippi Research and Development Center. The objective of the 42-hour program is to prepare individuals for leadership/practitioner positions at national, regional, state or community levels in the broad areas of economic development, industrial location analysis, resource utilization, and land-use planning and management. The collaborative arrangement with the Mississippi Research and Development Center, probably the most comprehensive economic development agency in the country, is a main feature of the program.

The Department of Geography and Area Development occupies the second floor of the ten-story Johnson Science Tower. The department's facilities include well-equipped classrooms, a darkroom, a weather station, a cartography-remote sensing laboratory, a quantitative laboratory, and an interactive computer terminal. Laboratory equipment includes a coordinate digitizer, stream table, Calcomp plotter, zoom transferscope, color additive viewers, a Variscan, desktop electronic calculators, a copy camera, and access to a Tektronix 4010 CRT associated with the University's new Xerox Sigma 9 computer. The facilities of the Mississippi Research and Development Center are also available to students working under any departmental degree plan. The department publishes *The Mississippi Geographer*.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University is on the semester system.

Candidates must be accepted by the University Graduate school. Admission to the departmental program is based on GPA, GRE score, three letters of recommendation, the experience record of the student, and the compatibility of his interests with those of the faculty.

Financial Aid: University grants-in-aid, various types of internships, fellowships, and teaching or research assistantships include stipend plus waiver of out-of-state tuition. March 1st is the deadline for applicants seeking financial aid. Applications for admission without aid will be considered until late spring. Notification of aid awards will be made by April 15.

STAFF AND ASSOCIATED FACULTY:

Dorlan L. Anderson, M.B.A., University of Southern Mississippi, 1975, Lecturer—economic development, economic analysis, urbanization and development

Huntley H. Biggs, Ph.D., Vanderbilt, 1970, Lecturer—industrial development, rural economic development, land use

Ralph D. Cross, Ph.D., Michigan State, 1968, Associate Professor—climatology, meteorology, water resources, watershed management

Kenneth J. Goodwin, M.B.A., Mississippi College, 1973, Lecturer—community development, urban economics

Tim W. Hudson, Ph.D. candidate, Clark—economic development, political, quantitative, Anglo-America

Robert J. Landry, MURP, Mississippi, 1974, Assistant Professor—urban and regional planning, community development, industrial development, local energy management

Jesse O. McKee, Ph.D., Michigan State, 1971, Professor—cultural/social, historical, population and human resources, Africa

William M. Roberts, Ph.D., Washington, 1964, Professor—political, economic, location analysis, economic development, U.S.S.R.

Kenneth C. Wagner, Ph.D., North Carolina, 1953, Lecturer—industrial development, economic development, urban sociology

Robert W. Wales, Ph.D., Kansas 1973, Associate Professor and Chairman—environmental planning, land use planning, resources management, field techniques, Latin America

Donald L. Williams, Ph.D., Kansas 1977, Assistant Professor—cartography, remote sensing, aerial photo interpretation, computer graphics, and biogeography

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

McDowell, Michael K. "A Conceptual Framework for the Assessment of Selected Power Plants in the Tennessee Valley Region," 1979.

Southwest Missouri State University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1972 **GRADUATE PROGRAM FOUNDED: 1979**

DEGREES OFFERED: M.S. in Resource Planning

GRANTED 7/1/79–6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 30

HEAD: Milton D. Rafferty

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor David Castillon, General Graduate Advisor, Department of Geography and Geology,

Southwest Missouri State University, Springfield, Missouri 65802
Telephone (417) 836-5607 or 5800 (department office)

PROGRAMS AND RESEARCH FACILITIES: The Master's of Science in Resource Planning is designed to provide professional training in resource planning activities that include land resource planning; mineral resources exploration and evaluation; map construction; aerial photograph interpretation and analysis; open space and recreational planning; and computer-based resource analysis and evaluation; and to develop professional resource managers of renewable and nonrenewable natural resources.

The Department of Geography and Geology is housed in Temple Hall which was completed in 1971. Research facilities include: x-ray diffraction; scanning electron microscope; atomic absorption unit; seismic apparatus; gravimeter; and a complete line of surveying and field equipment. An exceptionally good line of equipment is available to support cartography, aerial photo and remote sensing courses. Optical plotters, including ER-55, Kelsh and Zeiss C-8, are housed in modern photogrammetry and cartography laboratories. SMSU also has on-line capability with advanced computer-based land resource analysis systems, including R-GRID, IMGRID, CENTRO, LOCATE, and SYMAP.

Field work is an integral part of the resource planning program. Hands on experience is obtained through work in internships and in the Center for Resource Planning and Management. The department's map library is the largest of its kind in the region with more than 250,000 maps and a growing aerial photo collection. The new SMSU library scheduled for completion in 1980 adjacent to Temple Hall will include a modern map library designed by department faculty.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on the semester system and has an active summer program of eight weeks. Students seeking admission should request application papers from the Admissions Office. All students must take the GRE. Transcripts and letters of reference must be submitted. Full admission requires a 3.0 average or better. A diagnostic examination will determine each student's suitability to enter required courses and continue in the program.

Teaching and research assistantships are available which include waiver of out of state fees.

STAFF:

David Castillon, Ph.D., Michigan State, 1972—physical, environmental, geomorphology, field methods, soils
John Catau, Ph.D., Michigan State, 1973—urban, land use planning, open space and recreation planning
William Cheek, Ph.D., Michigan State, 1976—economic, quantitative methods, research methods, housing
Russel Gerlach, Ph.D., Nebraska, 1974—cultural and ethnic geography
Elias Johnson, Ph.D., Oklahoma, 1977—cartography, remote sensing, climatology
V.E. Kurtz, Ph.D., Oklahoma, 1960—remote sensing, photogrammetry
Erwin Mantei, Ph.D., Missouri-Rolla, 1965—geochemistry, geochemical techniques

Donald McInnis, Ph.D., Missouri-Columbia, 1970—meteorology, climatology
James Miller, Ph.D., Wisconsin, 1971—paleontology, biostratigraphy
Thomas Moeglin, Ph.D., Nebraska, 1978—engineering and environmental geology, soils
Milton Rafferty, Ph.D., Nebraska, 1970, Department Head—historical economic geography, population, Missouri
Burl E. Self, Jr., Ed.D., Oklahoma State, 1978—resource planning, urban and regional planning
Ronald Shaklee, Ph.D., Kansas, 1980—resource planning, urban and regional planning
Kenneth Thomson, Ph.D., Utah, 1970—economic, karst geology, geologic mapping

University of Southwestern Louisiana

DEPARTMENT OF SOCIAL STUDIES

DATE FOUNDED: 1954 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A.

GRANTED 7/1/79-6/30/80: 2

GRADUATE STUDENTS IN RESIDENCE: 14
NOT IN RESIDENCE: 1

COORDINATOR FOR GEOGRAPHY AND PLANNING: Dennis K. Ehrhardt

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Dennis K. Ehrhardt, Box 4-3531, USL Station, Lafayette, Louisiana 70504
Telephone (318) 264-6072

PROGRAMS AND RESEARCH FACILITIES: M.A. program in geography. Twenty-four hours course work plus thesis or 36 hours (non-thesis option). No language requirement. Cartography required if not taken as an undergraduate. The program includes city and regional planning as an area of concentration.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. For admission require 2.5 (on a 4.0 scale) undergraduate grade point average and minimum of 18 hours of geography, but will admit on probation students with lower grade-point averages. Graduate assistantships available on competitive basis pay $3000 for two semesters. Assistants teach two sections of freshmen each semester or assist in research

STAFF:
O. Douglas Abington, Ph.D., Louisiana State, 1973, Assistant Professor—physical, fluvial geomorphology
Henry W. Bullamore, Ph.D., Iowa, 1978, Instructor—urban, social, political

Dennis K. Ehrhardt, AICP, Ph.D., Iowa, 1972, Professor—urban, social, urban planning

David C. Johnson, Ph.D., Washington, 1976, Assistant Professor—urban planning, population

Charles C. Oldham, Ph.D., Ohio State, 1977, Assistant Professor—transportation, quantitative methods, planning

Timothy F. Reilly, Ph.D., Missouri, 1972, Assistant Professor—Africa, Soviet Union, Far East, Europe

Emmett F. Stallings, Ph.D., Florida State, 1970, Associate Professor—water resources, economic

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Williams, James J. "The Effect of Island Isolation on Insect Species Diversity," 1980.

State University of New York at Albany

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 7

GRADUATE STUDENTS IN RESIDENCE: 15
NOT IN RESIDENCE: 4

CHAIRMAN: Floyd M. Henderson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Admissions Office, College of Arts and Sciences, State University of New York at Albany, 1400 Washington Avenue, Albany, New York 12222
Telephone (518) 457-8683

PROGRAMS AND RESEARCH FACILITIES: The master's program in geography is designed to provide individually designed specialization for students preparing for a variety of careers in business, government, or for doctoral work at another university. The department emphasizes training in the systematic fields and techniques including: behavioral and social geography, cartography, computer techniques, energy and natural resource management, remote sensing, spatial and mathematical modeling, transportation systems, and urban and regional planning.

Work towards the M.A. includes 30 credit hours, of which at least 22 must be in geography. Supportive courses are available in the University's School of Criminal Justice, Graduate School of Public Affairs, Sociology, and Computer Science among others. Students are required to enroll in either a graduate research seminar or, with permission, a thesis program, and pass a comprehensive departmental oral examination. Each student devises, with his advisor, a program unique to his or her own interests and academic background. The department internship program offers practical on-the-job experience with private businesses and state agencies such as the New York State Departments of Transportation, Energy, Environmental Conservation, Commerce, Sea Grant Program, local and governmental planning commissions, and county governments.

Facilities available for support of the departmental program include the University Libraries with over one million items, the State Education Library, and well-equipped cartography and remote sensing laboratories including interactive graphics and digital image processing facilities linked by remote terminals to the University's UNIVAC 1100/80 computer. In addition to department and university facilities, location in the state capital affords ready access to the extensive resources of federal, state, regional and municipal agencies within the city.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University operates on the semester plan with additional Summer Sessions. Current University assistantships which carry stipends of $1850 to $4750 are available. The $1850 award carries, in addition, a waiver for half of the tuition. Students are also funded through foundation grants and governmental contract research. In addition there are State University scholarships, National Science Foundation Graduate Traineeships, and the New York State Scholar Incentive Program.

STAFF:

Stanley F. Blount, Ph.D., Northwestern, 1962, Professor—physical, resource management

Michael W. Dobson, Ph.D., Kansas, 1977, Assistant Professor—visual processing and map design, cartography, computer applications in cartography

W. Wayne Heiser, Ph.D., Northwestern, 1965, Associate Professor—Europe, U.S.S.R., political, energy resources

Floyd M. Henderson, Ph.D., Kansas, 1973, Associate Professor—remote sensing applications in land use, urban, and agriculture

Paul D. Marr, Ph.D., UC, Berkeley, 1967, Associate Professor—urban and regional planning, urban, coastal zone management

John S. Pipkin, Ph.D., Northwestern, 1974, Assistant Professor—urban, computer and quantitative techniques, behavioral geography, transportation

Christopher J. Smith, Ph.D., Michigan, 1974, Associate Professor—behavioral and social, mental health and well-being, locational conflicts, "sense of place", research methods

James E. Vitale, Ph.D. (civil engineering), Pittsburgh, 1977, Assistant Professor—freight and passenger transportation planning, transportation economics,energy and environmental analysis, spatial and mathematical modeling, quantitative methods, urban and regional planning

John W. Webb, Ph.D., Minnesota, 1958, Professor (Dean, College of Social and Behavioral Sciences)—human, especially settlement and population, Europe

ADJUNCT PROFESSORS:

David T. Hartgen, Ph.D. (transportation planning), Northwestern, 1973—transportation

Sambamurthy Thyagarajan, M.C.P., Ohio State, 1963—urban and regional planning

TITLES OF THESES COMPLETED 7/1/79–6/30/80:
Master's:

Anuta, Michael A. "Detection and Monitoring Gypsy Moth Defoliation in Eastern New York State from Landsat Digital Data," 1980.

Green, Richard L. "*CIRCMAP*—Graduated Circle Map Software Package with Hidden Line Removal," 1980.

Marcell, Richard F. "Drainage Basin Delineation from Seasat SAR Imagery," 1980.

State University of New York at Binghamton

GEOGRAPHY DEPARTMENT

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 8

GRADUATE STUDENTS IN RESIDENCE: 13
NOT IN RESIDENCE: 2

CHAIRMAN: John W. Frazier

FOR CATALOG AND FURTHER INFORMATION WRITE TO: John W. Frazier, Geography, CW128, State University of New York, Binghamton, New York 13901
Telephone (607) 798–2755

PROGRAMS AND RESEARCH FACILITIES: The M.A. degree in geography may be earned by following one of three tracks:

Track 1: General Geography—Designed for students interested in geography within a liberal arts context. Provides disciplinary foundation along classical lines, which can lead to teaching careers, or, combined with history, economics, or other social sciences, can lead to interdisciplinary work in scholarly areas such as conservation, environmental management, economic development, and international studies.

Track 2: Analytical Geography—This track is designed to educate students as geographical/spatial analysts, with particular emphasis on environmental and land use planning. Among the essential components are cartography, remote sensing, field techniques, computer mapping, and mass-data processing. Its objective is career preparation in these areas. To fulfill this goal, practical experience obtained from internships and field research will be integrated into the formal curriculum.

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Competence resulting from this training also provides the option of pursuing the Ph.D. degree.

Track 3: Geography and Urban Planning—Designed to educate students in urban analysis and planning, with particular emphasis on the integration of the environmental, urban-economic, and institutional aspects of planning. Among the essential components of this program are geographic techniques, urban seminars, environmental concerns such as water management, community involvement, and practical experience through internship programs. Similar to Track 2, graduates will be able to work for public and private agencies as well as pursue advanced degrees.

A non-thesis option is available in all tracks.

Extensive use is made of the IBM 370/155 computing system which includes a variety of statistical, simulation, and graphic routines in data analysis and plotting. Departmental facilities include modern cartography, remote sensing, air photo interpretation, and physical geography labs, computer terminals, digitizer, map library, classrooms, lecture halls, and library.

The department publishes the annual *Proceedings of the Applied Geography Conference,* and quarterly publishes *Research in Contemporary and Applied Geography.*

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Admission requirements: Bachelor's degree, or its equivalent, and a reasonable background in geography. The department may require up to five courses of undergraduate work without credit to make up undergraduate deficiencies. Graduate assistantships are offered. Teaching and research assistantships and planning internship stipends are available to qualified candidates. Apply to Dr. John Frazier, Chairman, Department of Geography, SUNY-Binghamton, Binghamton, New York 13901

STAFF:

Morris Budin, Ph.D., New School for Social Research, 1954, Professor—urban planning, economic geography, quantitative

Joseph H. Butler, Ph.D., Columbia, 1960, Professor—water resources, economic, Latin America

John Frazier, Ph.D., Kent State, 1976, Assistant Professor—urban-social, retailing, applied, field methods

Norah F. Henry, Ph.D., Kent State, 1976, Assistant Professor—social, cartography, medical, field methods

Shin-yi Hsu, Ph.D., UCLA, 1967, Associate Professor—cartography/remote sensing, quantitative methods, diffusion of innovations

Joseph M. Missavage, M.R.P., Cornell, 1954, Adjunct Associate Professor—urban and regional planning (part-time)

Burrell Montz, Ph.D. (pending), Colorado, Assistant Professor—natural hazards, environmental planning, population and resources management

Richard F. Place, J.D., Union College, Albany, 1968—legal aspects of planning (part-time)

Nicolay Timofeeff, Ph.D., Columbia, 1967, Associate Professor—quantitative methods, physical

Joseph E. Van Riper, Ph.D., Michigan, 1939, Emeritus Professor

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Kikuchi, Lawrence. "Recreational Behavior and User Satisfaction: A Case Study of Block Island," 1980.

State University of New York at Buffalo

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1962 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 11 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 35 M.A. 7 Ph.D.
NOT IN RESIDENCE: 4 M.A. 3 Ph.D.

CHAIRMAN: Ross D. MacKinnon

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director of Graduate Studies, Department of Geography, State University of New York at Buffalo, 415 Fronczak Hall, Amherst, New York 14260
Telephone (716) 636–2722

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers graduate training leading to the degrees of Masters of Arts and Doctor of Philosophy. The general areas of concentration supported by the department are: Urban and Regional Analysis, Geographic Information Systems and Computer Cartography, Physical Geography and Environmental Analysis, and Transportation and International Trade.

Opportunity is provided for students interested in pursuing professional careers in government or business, and for those interested in teaching and research. Because many graduates of the M.A. program seek employment in transportation, land use, and natural resource planning and management, a number of courses and research activities emphasize the planning aspects of these fields. Training in the computer manipulation of geographic data sets supports this planning interest. Some of the M.A. programs, such as those in Cartography and International Trade, offer internships in business and government.

Many of the teaching and research activities of the department make heavy use of modern computer technology. The department maintains one of the largest libraries of geographically oriented software in the world, and in addition to standard, university-wide facilities, the department's Geographic Information Systems Laboratory is equipped with a 48K Nova 840 minicomputer which is used to operate a modern, high-speed interactive graphics and digitizing facility. Cartographic and photographic laboratories are available for instructional and research use and special laboratory facilities are also available for students working on various problems in physical geography and related environmental areas.

The M.A. program may be completed in three semesters. Entering students take a first-semester program which emphasizes the acquisition of a broad background in a variety of substantative areas of the discipline as well as the development of operational skills in such areas as computer applications and statistics.

During the third semester, each student must undertake a major analysis effort demonstrating his or her technical competency and ability to integrate the various aspects of his or her area of specialization.

The departmental Ph.D. program admits superior students who desire in-depth research and technical training as a prelude to careers in education, government, and industry. Programs are designed on an individual basis and students are required to demonstrate acceptable levels of skill in areas such as mathematics, computer applications and statistics.

In addition, the Department, in cooperation with the School of Management, has a joint M.A.-M.B.A. degree option in International Business and World Trade. Students seeking admission to this option must apply to and be accepted by both academic units, they must complete some 76 hours of graduate study, and they must take 6 graduate-level hours of language. Upon completion, the M.A. in Geography, the I.T.C. certificate, and the M.B.A. degree will be awarded.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The university operates on the semester plan with additional Summer Sessions.

There are graduate assistantships awarded to qualified students and the department also attempts to provide summer support for qualified students. In addition, Graduate School Fellowships are available on a universitywide competitive basis.

Applicants must submit GRE scores (verbal and quantitative only), two letters of recommendation, transcripts, and a brief essay detailing their educational objectives and professional interests.

STAFF:

Athol D. Abrahams, Ph.D., Sydney, 1971, Associate Professor—fluvial geomorphology

Kurt Brassel, Ph.D., Zurich, 1973, Associate Professor—cartography, computer graphics, geographic information systems (on leave 1980–81)

David Brophy, Ph.D., Wisconsin, 1977, Assistant Professor—cartography

Hugh Calkins, Ph.D., Washington, 1972, Associate Professor—land use, urban and regional planning, geographic information systems

Edgar C. Conkling, Ph.D., Northwestern, 1962, Professor—international trade, land use theory, industrial location

Charles H. V. Ebert, Ph.D., North Carolina, 1957, Professor—pedology and soils geography, environmental impact studies, physical land use problems

Daniel A. Griffith, Ph.D., Toronto, 1978, Assistant Professor—economic, spatial statistics, urban

Susan Hanson, Ph.D., Northwestern, 1973, Associate Professor—urban social, disaggregate travel demand

John S. Haupert, Ph.D., Syracuse, 1955, Associate Professor—arid lands, agricultural, political, Middle East and North Africa

Richard Jarvis, Ph.D., Cambridge, 1975, Associate Professor—biogeography, fluvial geomorphology, climatology, quantitative

Barry Lentnek, Ph.D., Johns Hopkins, 1966, Associate Professor—regional analysis, development, Latin America

Ross D. MacKinnon, Ph.D., Northwestern, 1968, Professor—transportation, quantitative, migration models

Duane F. Marble, Ph.D., Washington, 1959, Professor—geographic information systems, travel behavior, urban

James E. McConnell, Ph.D., Ohio State, 1969, Associate Professor—international business and world trade, industrial location, regional development

Richard A. Mitchell, Ph.D., Iowa, 1964, Associate Professor—quantitative, urban

David A. Smith, Ph.D., Michigan, 1959, Associate Professor—transportation, Western Europe

Grant Thrall, Ph.D., Ohio State, 1976, Assistant Professor—spatial economic theory, public goods

Michael Wasilenko, M.A., Ohio State, 1975, Cartographic Technician—computer graphics, cartography

Michael Woldenberg, Ph.D., Columbia, 1968, Associate Professor—fluvial geomorphology, network theory

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Reed, Carl. "Design and Implementation of a Crime Geographic Information System," 1980.

Master's:

Dunn, J. David. "A Cost-Comparison Analysis and Selective-Criteria Evaluation for a Plant Location," 1980.

Fassel, Theresa. "Comparative Analysis of Branching Patterns In Expanding Botanical and Fluvial Trees," 1980.

Fegeas, Robin. "QUIKDIG—An Interactive Map Digitizing, Display and Processing System," 1979.

Holland, Carolyn K. "Computer-Assisted Letter Design," 1980.

Gordon, John P. "A Survey of the Export Financing Practices of Manufacturing Firms in Western New York," 1980.

Graf, Kathy. "Mexico As a Market for Western New York Business: A Study for the Buffalo District Office of the Department of Commerce," 1980.

Jablonski, Thomas. "A Survey of Electrical Energy Systems in Afghanistan, Korea, Saudi Arabia and Venezuela," 1979.

Kiang, Johnny. "Determining International Financial Risk: A Case Study of International Commercial Banking," 1979.

McGreevy, Patrick. "Employment and Urban Growth in Mexico 1895-1970," 1979.

Sarfaraz, Leyla. "The Decision-Making Process for a Commercial Loan," 1980.

Sham, Chi Ho. "Downstream Effects on the Topologic Structure of Drainage Basins," 1980.

Syracuse University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1931 GRADUATE PROGRAM FOUNDED: 1926

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 4 M.A. 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 12 M.A. 18 Ph.D.
NOT IN RESIDENCE: 2 M.A. 10 Ph.D.

CHAIRMAN: Robert G. Jensen

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. James L. Newman, Chairman of Admissions Committee, Department of Geography, 343 H.B. Crouse Hall, Syracuse University, Syracuse, New York 13210
Telephone (315) 423-2605/2606

PROGRAMS AND RESEARCH FACILITIES: The department offers a diversified graduate program for a wide variety of student interests, providing significant choice for depth and breadth of geographical inquiry. Programs are matched to student interests through a system of advisory committees; continuous interaction between graduate students and departmental faculty is sought. Emphases within the range of alternatives open to students include cultural, economic, political, and social geography, cartography, urban and regional development, historical geography, man-environment relationships and area studies. In recent years, foreign area research has sent students to Eastern Europe, the Soviet Union, East Africa, and Latin America. The Joint Oxford-Syracuse Project (JOSP), facilitated by Dellplain Assistantships, provides a long-term impetus for historical field research on Latin American population and colonial settlement patterns.

The department is part of the Maxwell Graduate School of Citizenship and Public Affairs, which is especially strong in the area of public policy, both domestic and foreign. The department participates actively in the following interdisciplinary programs of the Maxwell Graduate School: Urban and Regional Planning; Metropolitan Studies; International Relations; Public Affairs; American Studies; The Foreign and Comparative Studies Program which includes: East African Studies, Latin American Studies, South Asian Studies, Soviet and East European Studies. Supporting work in photogrammetry and remote sensing is provided by the Department of Forest Engineering in the SUNY College of Environmental Science and Forestry. Opportunities for graduate research and tutorials exist with the Urban Forest Research Project, U.S. Forest Service, on questions ranging from the role of vegetation in the urban ecosystem to land use and environmental policy alternatives for metropolitan regions.

Staff offices, classrooms, the graduate student room, and the Preston E. James Library are in an air-conditioned building at the center of campus, near the libraries and the computing center. In 1977 the Syracuse University Cartographic Laboratory moved to spacious, environmentally-controlled quarters in Heroy Geology Building.

The Laboratory, which includes a complete cartographic darkroom and student laboratory space, provides vital support to the department's teaching and research functions. Assistance for instructional and research purposes is provided by the full-time Staff Cartographer and his assistants. The computer mapping workroom, with a Hewlett-Packard minicomputer, plotter and digitizer, is located in H.B. Crouse Hall.

The department is characterized by an open intellectual environment, flexibility in designing programs of study for individual students, and an emphasis on competent empirical application of research skills. A wide variety of courses, seminars, colloquia, and individualized work is offered. Each year a number of distinguished geographers are brought to Syracuse for special lectures and seminar sessions. The department maintains a monograph series in cooperation with University Microfilms International, and a discussion paper series to which faculty and graduate students regularly contribute. A list of discussion papers, one of the most active series in the country, is available upon request.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. *Academic Plan:* The M.A. degree requires 30 credit hours, culminating in either a Master's thesis or two Master's papers, and a final oral examination on materials relevant to the student's work. This option provides scope for either breadth or topical depth within the Master's program; the decision is made by the student in consultation with faculty advisers, according to the student's needs, interests, and long range goals. The Ph.D. degree entails an additional 30 credit hours of courses both inside and outside the department, the writing of an approved dissertation proposal, the satisfactory completion of a combined written and oral qualifying examination, and finally, the successful completion of the doctoral dissertation. Students wishing to enter the Ph.D. program with a Master's degree in hand from another institution are expected to have formed a reasonably clear idea of dissertation plans to facilitate construction of a doctoral program of study. All applicants are encouraged to correspond with individual faculty regarding their special interest in any aspect of the Syracuse program in geography. *Admission:* The department does not subscribe to specific numerical criteria for evaluations of applications; minimum levels normally acceptable, however, for the undergraduate grade point average are about 3.0 (on a 4.0 basis) and for the GRE examinations a combined level of 1100 or above. Samples of written work may be submitted on a voluntary basis (these cannot be returned) to help the department evaluate applications on an individualized basis.

Applicants must submit transcripts, three letters of recommendation, and GRE scores on the Verbal, Quantitative, and Analytic Tests. The Advanced Geography GRE score is optional. *Financial Aid:* Teaching assistantships, research assistantships, and various fellowships are available. Annual stipends vary from about $4100 to $4600 plus remission of 9 to 12 hours of tuition per semester, making the total value of the awards worth about $7700 to $8200. Applicants should specify clearly any special regional or topical interests because certain forms of financial aid are so categorized. Applications are invited for a Cartographic Teaching Assistantship and for Dellplain Assistantships in Latin American Geography.

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STAFF:

John A. Agnew, Ph.D., Ohio State, 1975, Associate Professor—political, social, urban

David J. de Laubenfels, Ph.D., Illinois, 1953, Professor—biogeography, climatology, urban physical environments, circum-Pacific

Robert G. Jensen, Ph.D., Washington, 1964, Professor—economic, regional development, Soviet Union

D. Michael Kirchoff, M.A., Wyoming, 1972, Staff Cartographer—cartographic design and production, cartographic management and planning

Donald W. Meinig, Ph.D., Washington, 1953, Maxwell Professor of Geography—historical, cultural and social, United States

John Mercer, Ph.D., McMaster, 1971. Associate Professor—urban, political, research methods

Mark S. Monmonier, Ph.D., Pennsylvania State, 1969, Professor—cartography and mapping, quantitative methods, computer applications, automated map design

F. Douglas Muschett, Ph.D., Michigan, 1976, Assistant Professor—environmental policy-resource management, air quality, environmental impact of energy and economic development

James L. Newman, Ph.D., Minnesota, 1968, Associate Professor—population, diet-nutrition, Africa

David J. Robinson, Ph.D., London, 1967, Associate Professor—historical, urban, Latin America

David E. Sopher, Ph.D., UC, Berkeley, 1954, Professor—social, cultural (religions, languages, popular culture), South Asia

John H. Thompson, Ph.D., Washington, 1949, Professor—economic, urban and regional planning problems, United States, New York State

One additional position to be filled. Urban geography.

ADJUNCT FACULTY:

Rowan A. Rowntree, Ph.D., UC, Berkeley, 1973, Project Leader, Urban Forest Research—land use ecology, environmental policy

Ralph A. Sanders, Ph.D., Minnesota, 1974, Research Scientist, Urban Forest Research—urban, quantitative methods, North America

PROFESSOR EMERITUS:

Preston E. James, Ph.D., Clark, 1923, Maxwell Professor Emeritus of Geography.

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Bhatt, Bharat L. "The Untouchable Castes of India: A Geographic Appraisal," 1979. Mf., Univ. Microfilms.

Edwardh, Carol J. "The Older Generation: An Ecological Study of Old Age in Havana," 1979. Mf., Univ. Microfilms.

Talarchek, Gary M. "A Cybernetic Theory of Residential Decision," 1979. Mf., Univ. Microfilms.

Master's:

Domey, Jean E. "The Effect of Airline Deregulation on Air Service to Syracuse, New York," 1980.*

Hausladen, Gary J. "The Implications of Soviet-Japanese Trade for the Development of the Soviet Far East," 1979.*

Kolezar, Frank W. (Master's Papers) "Soviet Energy and Eastern Europe: The Role of Joint Ventures," "A Landmark-Based Location Reference Grid for Street Maps," 1979.*

Londa, Kathleen. "Urban Parks: Their Historical Development and Geographic Distribution in American Cities." 1979.*

Temple University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1961 GRADUATE PROGRAM FOUNDED: 1969

DEGREES OFFERED: M.A.

GRANTED 7/1/79-6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 0
NOT IN RESIDENCE: 0

CHAIRPERSON: Marilyn Silberfein

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Chairperson, Department of Geography, Temple University, Philadelphia, Pennsylvania 19122
Telephone (215) 787-7691

PROGRAMS AND RESEARCH FACILITIES: The objectives of the Master's program are to prepare students for further study and for jobs in government, industry, and planning. Throughout the program, the major emphasis is placed on training in research techniques and the development of analytical skills that can be applied to problem-solving of a geographic nature. Within this framework, graduate courses are organized around the specialities of individual faculty members.

The department places some emphasis on the geography of urban areas and metropolitan regions, and the Philadelphia area is used as a laboratory for research. In addition, close ties are maintained with the Urban Studies Program and urban oriented faculty in other departments.

Basic requirements in addition to those prescribed by the Graduate School are (a) a final comprehensive examination and (b) successful completion of either eight courses plus a thesis, or eleven courses. Students, especially those not planning further academic training, are encouraged to develop programs emphasizing one of three themes: teaching; data handling; or applied geography.

Graduate courses are offered in field methods, quantitative techniques, research design, remote sensing, cartography, computer techniques, regional analysis, land use, the physical environment, economic geography, urban geography, and social and cultural geography. In addition, practical experience is available through supervised teaching and internships.

The department is in Gladfelter Hall, a modern building housing the social science departments. Space and equipment for cartography, air photo interpretation, direct access to the computer, and graduate seminars are contained within the department. Some frequently-used map, book, and journal resources are in the department library; others are in nearby Paley Library. All graduate students are provided with a desk and office space readily accessible to faculty offices and department facilities.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester System. *Admission:* by Graduate School, based upon departmental evaluation of undergraduate transcript, two letters of recommendation, and GRE scores (verbal and quantitative). *Financial Aid:* Teaching assistantships and research assistantships, which carry tuition remission plus a stipend, are available. In addition, limited funds are available for tuition remission alone.

STAFF:

David J. Cuff, Ph.D., Pennsylvania State, 1972, Associate Professor—physical, cartography, energy

Roman A. Cybriwsky, Ph.D., Pennsylvania State, 1972, Associate Professor jointly with Urban Studies—urban, social, neighborhoods

Lane J. Johnson, Ph.D., Clark, 1960, Professor—urban, methodology, settlement systems

John W. Pawling, Ph.D., Michigan State, 1970, Associate Professor—physical, aerial photo interpretation, physical landscapes

George F. Rengert, Ph.D., North Carolina, 1971, Associate Professor—cultural, population, crime

Carolyn J. Ryan, Ph.D., Clark, 1964, Associate Professor—urban, economic, land use planning

Marilyn Silberfein, Ph.D., Syracuse, 1971, Associate Professor and Chairperson—cultural, Africa, environmental perception

John C. Western, Ph.D., UCLA, 1977, Assistant Professor—urban social, cultural, South Africa

William J. Young, Ph.D., Tennessee, 1971, Associate Professor—economic, market areas, health care, energy resources

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University of Tennessee

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1914 GRADUATE PROGRAM FOUNDED: 1928

DEGREES OFFERED: M.S., Ph.D.

GRANTED 7/1/79-6/30/80: 4 M.S., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 17 M.S. 13 Ph.D.
NOT IN RESIDENCE: 2 M.S. 6 Ph.D.

HEAD: Sidney R. Jumper

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Sidney R. Jumper, Department of Geography, University of Tennessee, Knoxville, Tennessee 37916
Telephone (615) 974-2418

PROGRAMS AND RESEARCH FACILITIES: *Programs:* The M.S. and Ph.D. programs permit graduate students to gain both broad and specialized competence and to pursue their own research interests. The department is particularly well-qualified to direct studies in the geography of rural and non-metropolitan areas. Other strengths are systems-oriented physical geography; urban geography; geography of economic development; and regional and historical geography of Anglo-America.

The Master's program requires a minimum of 45 quarter hours including 9 hours credit for thesis. Specific course requirements for the Doctoral program are determined by faculty committee in accordance with interests and needs of the student. Master's degree normally prerequisite to Ph.D. program. A minimum of 15 hours of collateral work, a reading knowledge of one foreign language, and competence in appropriate techniques are required. Written and oral preliminary examination; oral final examination.

Research facilities: The department is convenient to libraries and a wide range of related departments. The University Computer Center is unusually accessible to students and offers excellent short courses and other aids for users. Cartographic, photographic, computer graphics, and remote sensing equipment and a map library are available in the department. The department is currently a partner to research contracts with the National Science Foundation, the Department of Energy, the Tennessee Historical Commission, and the Oak Ridge National Laboratory, involving participation by and financial aid for graduate students. Departmental contacts with Tennessee Valley Authority and Oak Ridge National Laboratory have led directly to the employment of graduate students and degree recipients.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Tennessee operates on a quarter system. New graduate students may begin their work during any quarter, although the fall quarter is preferred. Applicants should write to the Department of Geography for particulars on submitting applications. A "B" or higher undergraduate grade average is normally required for admission to a degree program, although admission in a probationary status may be granted to those with lower averages. Students seeking financial aid should file completed applications no later than February 15. Official transcripts of all previous college work, verbal and quantitative scores from the Graduate Record Examination, and at least three letters of recommendation are required.

Several forms of financial aid are available through the department. These include a number of teaching and other types of assistantships which carry a waiver of all tuition and maintenance fees in addition to a stipend. Several part-time research positions are funded through a contract between the department and the Resource Analysis Group of Oak Ridge National Laboratory. Support is also normally available through research grants and contracts awarded to members of the faculty. University fellowships are available, and applications may be obtained by writing directly to the Vice Chancellor for Graduate Studies and Research.

STAFF:

Charles S. Aiken, Ph.D., Georgia, 1969, Professor—rural, agricultural, Anglo-America, U.S. South

Thomas L. Bell, Ph.D., Iowa, 1973, Associate Professor—urban, location theory, transportation, quantitative methods

Leonard W. Brinkman, Ph.D., Wisconsin, 1964, Associate Professor—historical, Anglo-America, Appalachia

James R. Carter, Ph.D., Georgia, 1973, Assistant Professor—thematic cartography, computer graphics, climatology

William N. Cherry, M.S., Tennessee, 1953, Assistant Professor—economic, Tennessee

Edwin H. Hammond, Ph.D., UC, Berkeley, 1951, Professor—land-surface systems, land forms, concepts and methods

Sidney R. Jumper, Ph.D., Tennessee, 1960, Professor and Head—utilization of resources, agricultural, economic

Robert G. Long, Ph.D., Northwestern, 1949, Professor—Latin America, Asia, cartography

Clarence W. Minkel, Ph.D., Syracuse, 1960, Professor and Dean of Graduate School—Latin America, geography of development

Charles T. Paludan, Ph.D., Denver, 1975, Associate Professor—remote sensing, physical, cartography (assigned to U.T. Space Institute, Tullahoma, Tennessee)

Bruce A. Ralston, Ph.D., Northwestern, 1976, Assistant Professor—transportation, urban, quantitative methods, diffusion theory

Janet I. Ralston, M.A., Northwestern, 1976, Cartographic Technician

John B. Rehder, Ph.D., Louisiana State, 1971, Associate Professor—cultural, rural settlement, remote sensing

Theodore H. Schmudde, Ph.D., Wisconsin, 1960, Professor—environmental impact of rural land uses, soils, recreational settlement, field methods

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Arbogast, Allen Ray. "Nonmetropolitan Viability in the East South Central Census Division of the United States," 1980.

Kung, Hsiang-te. "Aspects of Urban Hydrology of Knoxville, Tennessee," 1980.

Master's:

Lau, Edmond Kam-Ming. "An Assessment of Hong Kong's Political Future," 1979.

Maertens, Thomas Brock, Jr. "The Relationship of Maintenance Costs to Climate and Terrain on Interstate 40 in Tennessee," 1980.

Mayfield, Michael W. "An Examination of the Anomalous Runoff Regime of the Obed-Emory Basin of the Cumberland Plateau, Tennessee," 1980.

Sherman, Edward Walter. "Flash Flooding and the Flood Hazard in Gatlinburg, Tennessee," 1979.

Texas A&M University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1968 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.S., Ph.D.

GRANTED 7/1/79-6/30/80: 1 M.S.

GRADUATE STUDENTS IN RESIDENCE: 7 M.S. 3 Ph.D.
NOT IN RESIDENCE: 1 M.S. 2 Ph.D.

HEAD: Campbell W. Pennington

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Registrar,
Texas A&M University, College Station, Texas 77843
Telephone (713) 845-1031
For information about department: Head, Department of Geography
Telephone (713) 845-7141

PROGRAMS AND RESEARCH FACILITIES: The department is broadly interested in human and physical geography as exemplified by staff interests listed below. Associated departments in the College of Geosciences provide excellent opportunities for graduate level work in geology, meteorology, and oceanography, while other colleges of the University are able to support advanced study in a variety of natural resources, planning and social science areas.

Specialized interests, many of which are shared by the staff-at-large, include: analysis of man-land relationships with emphasis upon diffusion, technological innovation, and adaptation of social, political, and economic systems; historical geography of settlement and interlinked development of the Atlantic world, with a focus upon various parts of Europe and North America, Middle America and the Caribbean; the social construction of the everyday landscape; culture history of watercraft and their significance as agents of diffusion; cross-cultural and cross-environmental study of environmental perception and cognition; environmental decision-making and its effects upon the cultural landscape; the impact of natural hazards; availability of energy resources; plant migration and speciation; origins of domesticated plants and agricultural systems; soil development as an environmental indicator of landscape chronology; electron microscope investigations of weathering processes; factors affecting urban residential land value; urban environmental quality; spatial impact of residential property taxes; and both qualitative and quantitative methods in geography. The department maintains a Cartographic Service Unit as a research and teaching support facility. Services of the campus Computer Center and the Electron Microscopy Center are available to students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Texas A&M University is on the semester system. *Admission requirements:* Bachelor's degree and approval by Department Head, 1000 minimum on GRE. Research, teaching assistantships are available.

STAFF:

George F. Bass, Ph.D., Pennsylvania, 1964, Professor—nautical archeology, Mediterranean culture history

Robert S. Bednarz, Ph.D., Chicago, 1975, Assistant Professor—economic, urban

Earl Cook, Ph.D., Washington, 1954, Professor—environmental and resource analysis

Peter J. Hugill, Ph.D., Syracuse, 1977, Assistant Professor—social, historical, United States

Clarissa T. Kimber, Ph.D., Wisconsin, 1969, Associate Professor—plant geography, Caribbean

Christopher Müller-Wille, M.A., Chicago, 1974, Lecturer/Production Supervisor—cartography

Campbell W. Pennington, Ph.D., UC, Berkeley, 1959, Professor and Head—historical geography of the United States, Middle America

Joseph Sonnenfeld, Ph.D., Johns Hopkins, 1957, Professor—behavioral geography, extreme environments

Frederick van Doorninck, Jr., Ph.D., Pennsylvania, 1967, Associate Professor—nautical archeology

Kenneth L. White, Ph.D., UC, Riverside, 1976, Assistant Professor—physical, soils,geomorphology, cartography

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Koehler, Janet E. "Tyler State Park: Man's Impact on the Vegetation and Soils in Camping Facilities," 1979.

The University of Texas at Austin

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1949 GRADUATE PROGRAM FOUNDED: 1950

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 4 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 22 M.A. 7 Ph.D.
NOT IN RESIDENCE: 9 M.A. 3 Ph.D.

CHAIRMAN: George W. Hoffman

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Graduate Advisor, Department of Geography, University of Texas at Austin, Austin, Texas 78712
Telephone (512) 471-5116

PROGRAMS AND RESEARCH FACILITIES: The graduate program is designed to train modern geographers in specialized areas of research and teaching. The Department places particular emphasis on the interrelationships among six fields: physical, cultural, remote sensing, urban and economic geography, and environmental analysis. The program is oriented to research, although course work may be suggested to remedy academic deficiencies. Students are strongly encouraged to undertake supporting work in allied fields. Ordinarily, a graduate student, especially one at the Ph.D. level, is expected to integrate a thematic specialization with a regional interest. All incoming graduate students are strongly urged to select individual faculty advisors immediately.

University research centers with which the Department has strong and active ties include the Population Research Center, Water Resources Research Center, Bureau of Business Research, Bureau of Economic Geology, Center for Advanced Transportation Studies, the L. B. J. School of Public Affairs, and Energy Studies Center. Special area study programs include Latin America, Middle East, Asia, and Europe. Facilities available for student use include a computer center based on a CDC 6600 and a research cartography and remote sensing laboratory, map library, and computational equipment housed within the Department.

Every graduate student will undertake a course on issues and research in geography during his first year of residence. For the master's degree, students must complete 30 or 36 hours of course work with a minimum average grade of B. In addition, proficiency must be demonstrated in one foreign language or in quantitative analysis, and a thesis or two research papers must be written and approved. For the doctorate, students must complete a master's degree or the equivalent, demonstrate proficiency in two foreign languages or one foreign language and quantitative methods, and complete a course in history and philosophy and one in issues and research in geography (if not completed at the master's level). Students are admitted to candidacy upon the successful completion of examinations on geographic methodology and philosophy, the candidate's fields of special research, and dissertation proposal. The Ph.D. degree is granted upon the successful defense of the dissertation.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Academic Plan: Semester System. *Admission Requirements:* (1) Admission to Graduate School, by application; (2) A score of 1000 (combined quantitative and verbal) on the Graduate Record Examination; (3) A "B" average for the last two years of college. Some departmental discretion may be exercised on an individual basis. *Financial Aid:* Fellowships, Scholarships, Teaching Assistantships, Research Assistantships, Cartographic Assistantships, and Map Clerk positions.

STAFF:

Stanley A. Arbingast, Ph.D., Washington, 1956, Professor—resources, economic
Bharat Bhatt, Ph.D., Syracuse, 1979, Assistant Professor—social-cultural, comparative urban, South Asia
M. George Bowden, Ph.D., Texas, Adjunct Associate Professor—geographic education
Alfred W. Crosby, Jr., Ph.D., Boston, 1961, Professor—environmental, ecological, medical
Christopher Shane Davies, Ph.D., Indiana, 1970, Associate Professor—urban
Robin W. Doughty, Ph.D., UC, Berkeley, 1971, Associate Professor—cultural, historical ecology
David J. Eaton, Ph.D., Johns Hopkins, 1977, Associate Professor—environmental
Paul Ward English, Ph.D., Wisconsin, 1965, Professor—cultural, Middle East
George W. Hoffman, Ph.D., Michigan, 1950, Professor—economic, political, East-West Europe
Robert K. Holz, Ph.D., Michigan State, 1963, Professor—remote sensing, cartography, North Africa
David L. Huff, Ph.D., Washington, 1960, Professor—spatial design of market systems, consumer spatial behavior
J. Richard Jones, Ph.D., Boston, 1977, Assistant Professor—geomorphology, biogeography, quantitative methodology
Lorrin G. Kennamer, Ph.D., George Peabody, 1952, Dean, UT School of Education, Professor—geographic education, Anglo-America
Ian R. Manners, D. Phil., Oxford, 1969, Associate Professor—Middle East, environmental resource management
James Nasuti, Ph.D., Hawaii, 1978, Assistant Professor—physical, climatology, Asia
Larry L. Patrick, Ph.D., Pittsburgh, 1977, Assistant Professor—Latin America, cultural
Gundars Rudzitis, Ph.D., Chicago, 1977, Assistant Professor—economic, environmental

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Archer, Ewart D.G. "Effects of the Tourist Industry in Barbados, West Indies," 1980.*

Master's:

Dykstra, Randall C. "Citizen Participation and the National Park Service: A Case Study of Sleeping Bear Dunes National Lakeshore, Michigan," 1980.*

Hobbs, Joseph J. "Sands of the Shore: Animals in Egyptian Life," 1980.*

Pimentel, David V. Report I: "An Analysis of Photomorphic Units in Central Texas," and Report II: "Perceptions of Nature: The Survival Value of Ideological Constructs," 1980.*

Urdahl, Candy K. "The Effectiveness of the Law of the Sea as a Resource Allocation Tool in the Persian-Arabian Gulf," 1979.*

University of Toledo

DEPARTMENT OF GEOGRAPHY AND PLANNING

DATE FOUNDED: 1963 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 4

GRADUATE STUDENTS IN RESIDENCE: 17
NOT IN RESIDENCE: 10

CHAIRMAN: Eugene N. Franckowiak

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Donald W. Lewis, Graduate Adviser, Department of Geography and Planning, University of Toledo, Toledo, Ohio 43606
Telephone (419) 537-2545

PROGRAMS AND RESEARCH FACILITIES: The Master of Arts program is designed to provide a background within the context of departmental faculty interests and related university offerings.

The master's program with geography specialization is designed to provide the opportunity for individualized programs in (a) economic geography; (b) urban geography; (c) environmental perception; (d) physical geography; (e) conservation and management of natural resources; and, (f) international/foreign area development.

The Master's program with planning specialization is designed individually to provide the opportunity for work in (a) urban planning and development; (b) regional planning and development; (c) environmental planning; and, (d) health planning. Appropriate agency internships are an integral part of the planning specialization.

Opportunities for instruction and research are enhanced by close association with graduate programs in economics, sociology and anthropology, psychology, public administration, geology, biology, and in some areas within the colleges of business administration, engineering, and law.

The department occupies newly renovated quarters including modern laboratories. Students have easy access to the facilities of the university libraries (with over one million volumes) and specialized facilities in law, map collections, and government documents. All students have easy access to the regional as well as the university and departmental computation services and to a centralized technological media center.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The program is on the quarter system. All students must complete 45 quarter hours of approved study including specific core courses and a nine credit-hour thesis. There is a comprehensive examination for admittance to candidacy. Also required is either appropriate supervised teaching assistant experience or a planning internship. For most students, two academic years are needed to complete the program.

Applicants should hold a bachelor's degree in geography or a related field. Others are admitted who are willing to take additional appropriate work. Usually a student will present a GPA of at least 2.7 (4.0 scale) and must score satisfactorily on the aptitude Graduate Record Examination.

Graduate teaching assistantships, University and other fellowships, and remunerative half-time graduate planning internships are available to most qualified applicants.

STAFF:

Robert M. Basile, Ph.D., Ohio State, 1953, Professor—physical especially climatology, micro-climatology, soils

Basil A. Collins, Ph.D., Michigan, 1973, Associate Professor—Middle East and North Africa, cultural, history of geographical thought

Walter T. Edelen, M.C.P., Georgia Institute of Technology, 1960, Adjunct Associate Professor—urban and regional planning, urban redevelopment and housing

Byron E. Emery, Ph.D., Michigan, 1963, Professor—political, cultural, regional development planning

Eugene N. Franckowiak, Ph.D., Michigan, 1973, Associate Professor—cartography, Latin America especially Andean America, environmental perception

Lawrence A. Hoffman, Ph.D., Johns Hopkins, 1950, Professor—economic especially development, East and South Asia especially India, historical urban

Donald W. Lewis, Ph.D., Ohio State, 1966, Professor—neighborhood revitalization, environmental planning and resource management, Anglo-America

William A. Muraco, Ph.D., Ohio State, 1971, Professor—economic especially location theory, urban, quantitative research methods

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Lipinski, Donald T. "Residential Perception of the Maumee River," 1979.

Mizerny, Martha Z. "Neighborhood: Function and Place in the Urban Environment: A Case Study in Rossford, Ohio," 1979.

Rachwal, Theodore A. "Resource Management Problems of Michigan's Lake Superior Commerical Fishery," 1979.

Wells, James P. "Perceptions of Downtown Revitalization: A Diffusion of Investor Confidence in the Toledo Central Business District," 1979.

Towson State University

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL PLANNING

DATE FOUNDED: 1955 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 6

GRADUATE STUDENTS IN RESIDENCE: 2
NOT IN RESIDENCE: 33

CHAIRPERSON: James E. DiLisio

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dean, Graduate Studies, Towson State University, Towson, Maryland 21204
Telephone (301) 321-2501

PROGRAMS AND RESEARCH FACILITIES: The program is designed to provide a broad mastery of the field through a balanced curriculum of topical and regional studies with research experiences. Requirements for the M.A. are the successful completion of 30 semester hours with thesis (36 semester hours without thesis), and a reading knowledge of a modern language or competency in statistical techniques.

The University is situated in the suburban area north of Baltimore. Libraries and research facilities of several large universities and government agencies of Baltimore, Washington, and Philadelphia are within a short distance of the campus. An ample collection of the principal geographical books and periodicals is contained in the college library.

A recently completed, air-conditioned building houses the Department of Geography and its special facilities, which include a well-equipped cartography/air photo laboratory, map library, Department library, electronic calculators, and audio-visual materials. Towson State is the location of the Maryland State Collges Information Center (MSCIC) which serves the needs of eight state colleges and universities with its UNIVAC 1106. Housed within the Department of Geography and Environmental Planning are several computer telecommunications terminals. Available software includes the SPSS, Biomed, SYMAP, etc.

The Department has also operated a successful internship program since 1970. Internships are available with several private firms and public agencies at the federal, state, and county levels.

Papers in Geography, a discussion paper series, is published by the Department and graduate student input is encouraged.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Admission is based on evaluation of individual applicant's experience, transcript of previous course work, and personal references. Provisional admission to a qualifying program may be granted for those lacking prerequisites. Financial aid includes Graduate Assistantships and Fellowships.

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STAFF:

Norman R. Diffenderfer, M.A., Nebraska, 1943, Associate Professor—Anglo-America, soils and plant geography

James E. DiLisio, Ph.D., Oklahoma, 1975, Assistant Professor—economic, quantitative, energy

David Firman, Ph.D., Maryland, 1955, Professor—Asia, environmental studies

Kenneth Haddock, Ph.D., Michigan State, 1975, Assistant Professor—medical, Latin America

Hlib S. Hayuk, M.A., Wisconsin—Milwaukee, 1967, Assistant Professor—Soviet Union, population

Curtis V. Martin, M.A., Clark, 1953, Associate Professor—Europe, urban, political

Wayne L. McKim, Ph.D., Northwestern, 1974, Associate Professor—Africa, cultural

Ralph C. Scott, Ph.D., Georgia, 1972, Assistant Professor—meteorology, climatology, geomorphology

Marshall L. Stevenson, M.A., East Carolina, 1968, Assistant Professor—cartography

PART-TIME STAFF:

George Beishlag, Professor Emeritus—geography of Maryland

William Brooner, Earth Satellite Corporation—air photo interpretation

Derrich Coleman, Johns Hopkins University—soils and vegetation

John Dillon, Baltimore County Office of Planning and Zoning—principles of zoning

Walter H. Kratzmeier, Baltimore County Office of Planning and Zoning—principles of planning, urban design

Robert Marriott, Baltimore County Office of Planning and Zoning—planning implementation, comprehensive planning

Donald Outen, Regional Planning Council—urban systems

Peter M. Zimmerman, Attorney at Law—environmental law

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Masters:

Peden, Henry C., Jr. "A Spatial Analysis of Wind Power Feasibility in the United States," 1979.*

University of Utah

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1947 GRADUATE PROGRAM FOUNDED: 1948

DEGREES OFFERED: M.A., M.S., Ph.D.

GRANTED 7/1/79–6/30/80: 6 Masters, 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 21 Masters 7 Ph.D.
NOT IN RESIDENCE: 10 Masters 0 Ph.D.

CHAIRMAN: Roger M. McCoy

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Director of Graduate Studies, Department of Geography, University of Utah, Salt Lake City, Utah 84112
Telephone (801) 581-8218

PROGRAMS AND RESEARCH FACILITIES: The Department offers programs leading to Ph.D., M.A., or M.S. degrees. The Master's degree usually requires a thesis, but with departmental approval a non-thesis option may be selected. The Department offers a broad program in systematic and regional geography, techniques, and methodology. Areas of specialization are: Quaternary studies involving geomorphology and climatology applied to paleoenvironmental analysis; urban-economic studies; and natural resources analysis. Strong ties are maintained with allied departments within the University and with many local, state, and federal planning and resource management agencies. The Department faculty cooperate in University-wide regional programs.

Cartographic facilities include a large laboratory and complete reproduction facilities, with a large copy camera and darkroom. The Department's Geographic Research Laboratories have various funded projects mapping land use and resources. Equipment includes a density slicer, map and image digitizers, minicomputer, image compositor, and zoom transfer scope.

The Department places emphasis on field and laboratory techniques and quantitative methods. A growing library of computer mapping and statistical programs is maintained in the Department and at the University Computer Center.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Quarter system. Candidates must be accepted by the University's Graduate School. A 3.00 G.P.A. is required for acceptance. Candidates should have three letters of recommendation and GRE scores sent directly to the Graduate Studies Committee. There are several teaching assistantships ranging in stipend from $3000 to $3600, plus a waiver of tuition. Research assistantships, part-time project work, and summer employment are available. Applications for graduate school and for assistantships are due February 15. Internships may be arranged with federal, state, and local public agencies.

FACULTY:

Elizabeth K. Burns, Ph.D., UC, Berkeley, 1974, Assistant Professor—contemporary North American metropolitan structure and planning, roots and directions of urban change

Donald R. Currey, Ph.D., Kansas, 1969, Associate Professor—geomorphology and Quaternary stratigraphy of mountain and desert environments in the Western U.S.

Albert L. Fisher, Ph.D., Johns Hopkins, 1954, Professor—systematic and applied political geography, boundaries, distribution of elites, Europe

Dennis E. Fitzsimons, Ph.D. candidate, Kansas, Associate Instructor—cartography, thematic and cognitive mapping, South Africa

Morris E. Johnson, M.C.P., MIT, 1951, Adjunct Professor—visual quality of urban environments; process for comprehensive planning; physical, social, and economic impact of development; planning administration

Jeanne Kay, Ph.D., Wisconsin-Madison, 1977, Assistant Professor—historical changes in natural environments, wilderness analysis

Paul A. Kay, Ph.D., Wisconsin-Madison, 1977, Assistant Professor—climatology, Holocene environments and climates, dendrochronology

James W. King, Ph.D., Northwestern, 1964, Associate Professor—cultural and economic geography in Africa and the Middle East

Chung-Myun Lee, Ph.D., Michigan, 1961, Professor—land use analysis using aerial photo and satellite data to examine land use systems and growth, population migration and redistribution problems in advanced and developing countries, East and Southeast Asia

Roger M. McCoy, Ph.D., Kansas, 1967, Associate Professor and Chairman—remote sensing applications to hydrology, fluvial geomorphology, and resource mapping

Merrill K. Ridd, Ph.D., Northwestern, 1963, Professor—remote sensing and applied geomorphology in resource mapping and land use planning, cartography

Harry J. Schuler, Ph.D., Indiana, 1977, Assistant Professor—transportation, urban planning and public policy, economic geography, human geography

ADJUNCT FACULTY AND PROFESSORS EMERITI:

Richard D. Chong, Master of Architecture, UCLA, 1974, Adjunct Assistant Professor—urban planning and design

Vasyl M. Gvosdetsky, Ph.D., Kiev, 1936, Professor Emeritus—soils, physiography, Soviet Union

H. Bowman Hawkes, Ph.D., Ohio State, 1947, Professor Emeritus—climatology, physiography, geographic education, Europe

Robert P. Huefner, D.B.A., Harvard, 1972, Adjunct Professor—planning administration, local government

Lee Kapaloski, Ph.D. candidate, Colorado, J.D., Utah, Adjunct Assistant Professor—environmental law and planning

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Brinton, Caleb Jefferis, IV. "A Spatial Analysis of Steam Coal Exportation From the Rocky Mountains and Northern Great Plains to Out-Of-Area Power Plants," 1979.*

Frank, Thomas Delane. "The Identification of Unit-Source Areas in Semiarid Rangeland Watersheds Utilizing an Unsupervised Classification of Landsat Digital Data," 1979.*

Wyckoff, John Wynn. "Evaluating Mule Deer—Winter Range Relationships Through Landsat Satellite Imagery," 1980.*

Master's:

Fagg, Glen L. "Environmental Influence on Human Occupance: East Millcreek Area, Utah," 1979.*

Johnson, Jack C. "Optimum Boundaries for Middle Schools in the Granite School District in 1980," 1979.*

Martin, Sherrie Lee. "A Geographic Investigation of Non-Resident Visitors To Temple Square," 1979.*

Peters, Perry E. "Some Measures of Distribution: A Conceptual and Theoretical Review of Indexes of Inequality and Concentration," 1979.*

Spendlove, Joseph Wayne. "Teaching the Use of Air Photos and Satellite Imagery with Maps," 1979.*

University of Vermont

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1970

DEGREES OFFERED: M.A. and M.A.T.

GRANTED 7/1/79–6/30/80: 3

GRADUATE STUDENTS IN RESIDENCE: 14
NOT IN RESIDENCE: 13

CHAIRMAN: Canute VanderMeer

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Program Coordinator, Department of Geography, University of Vermont, Burlington, Vermont 05405
Telephone (802) 656-3060

PROGRAMS AND RESEARCH FACILITIES: The M.A. degree is general in character rather than specialized and requires thirty graduate credits, including six devoted to a thesis or two research papers. Faculty interests span most systematic aspects of geography. Technique competence includes cartography, remote sensing, and quantitative methods. Regional interests and field experience are virtually worldwide in scope. Vermont, the Lake Champlain Basin, and adjacent areas in Canada and Northern New England provide diverse settings for interesting field work. Among the facilities are a library with a fine collection on Vermont and Canada; a map library; a new DEC 2060 computer system with plotter and graphics terminal; and well-equipped cartographic and remote sensing laboratories.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system plus summer sessions. Admission requirements are detailed in the Graduate College Bulletin. Applicants should present twelve semester hours or their equivalent in geography and supporting courses in related fields. Persons applying for financial assistance as well as admission should have applications with all supporting materials including GRE scores in the Graduate College by March 1. Most New England students from outside Vermont may be eligible for in-state tuition rates. The Department has six Graduate Teaching Fellowships. The Graduate College has fellowships and scholarships.

STAFF:

H. Gardiner Barnum, Ph.D., Chicago, 1965, Associate Professor—regional and historical geography of Europe, urban, cartography

Andrew R. Bodman, Ph.D., Ohio State, 1978, Assistant Professor—economic, urban, planning, quantitative methods

Daniel W. Gade, Ph.D., Wisconsin, 1967, Professor—cultural, biogeography, Latin America, Mediterranean

Aulis Lind, Ph.D., Wisconsin, 1968, Associate Professor—physical, remote sensing of environment, water resources

Harold A. Meeks, Ph.D., Minnesota, 1964, Associate Professor—physical, rural land use, U.S.S.R., United States, New England

Edward J. Miles, Ph.D., Syracuse, 1958, Professor—political, Canada, Africa, historical geography of the United States and Canada

Charles C. Ryerson, Ph.D., Southern Illinois, 1977, Assistant Professor—applied climatology, physical, computer cartography

Canute VanderMeer, Ph.D., Michigan, 1962, Professor—agricultural, China, Southeast Asia

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Fayne, Francis A. "Onshore Aids to Navigation Along Outer Cape Cod: A Human Response to Its Shipwrecks. A Study in Historical Geography," 1980.*

Herlihy, Peter H. "Cultural Biogeography of Lonchocarpus Nicou: Amazonian Fish Poison and Biodegradable Insecticide," 1979.*

Mitchell, Lawrence F. "Over the Rhine: A Part of the Cincinnati Cultural Landscape," 1980.*

Virginia Polytechnic Institute and State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1975 GRADUATE PROGRAM FOUNDED: 1979

DEGREES OFFERED: M.S.

GRANTED 7/1/79-6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 10

CHAIRMAN: Charles M. Good

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Bonham C. Richardson, Graduate Advisor, Department of Geography, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061
Telephone (703) 961-6886

PROGRAMS AND RESEARCH FACILITIES: The department is in the College of Arts and Sciences and offers the M.S. in geography. The program prepares students for a variety of careers as geographers in business, government, research and planning, teaching, or for doctoral work at another university. The M.S. degree requires a minimum of 45 quarter hours of credit, including three core courses—the History and Philosophy of Geography, Geographic Research Design, and a choice among three offerings in particular geographic techniques. Students are encouraged to pursue their own interests and to explore offerings in allied disciplines. The department is notably strong in the cartography-graphics-remote sensing area and also in the cultural geography of tropical regions.

The university library contains two million volumes, including an excellent collection of serial publications in geography and worldwide coverage of maps and atlases. Departmental facilities include a Spatial Analysis Laboratory, containing a variety of peripheral computing equipment and featuring interactive computer graphics, supported on-line by the university's IBM 370/158 systems and Honeywell Multics System. There is also a remote sensing laboratory, darkroom, and remodeled cartography laboratory in the department area as well as a small departmental library containing the major geographical periodicals.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admission Requirements*—The graduate program is open to qualified students holding a Bachelor's degree from an accredited college. Nongeography majors are encouraged to apply. In general a B average for junior and senior years is expected. Individual students' backgrounds and interests will be considered in developing programs and course requirements. Quarter System. *Financial Aid*—Departmental Graduate Assistantships-Stipend $2250–$4500 for three quarters. Graduate students pay no out-of-state fees.

STAFF:

Susan R. Brooker-Gross, Ph.D., Illinois, 1977, Assistant Professor—urban social

James B. Campbell, Ph.D., Kansas, 1976, Assistant Professor—physical, remote sensing

Charles M. Good, Ph.D., Chicago, 1970, Associate Professor—cultural, medical, Africa

Lawrence S. Grossman, Ph.D., Australian National, 1979, Assistant Professor—cultural, ecology, resources, Oceania

Alan M. MacEachren, Ph.D., Kansas, 1979, Assistant Professor—cartography, environmental perception

Thomas A. Maraffa, ABD, Ohio State, Assistant Professor—urban-economic, quantitative

Robert W. Morrill, Ph.D., Clark, 1973, Assistant Professor—political, geographic education

Bonham C. Richardson, Ph.D., Wisconsin, 1970, Associate Professor—cultural, historical, Caribbean

ASSOCIATED PROFESSORS IN OTHER DEPARTMENTS:

James R. Bohland, Ph.D., Georgia, 1970, Associate Professor and Chairman, Urban Affairs—population, settlement, computer applications

Donald Daidone, M.S.L.S., Western Michigan, 1976, Assistant Professor and Assistant Social Science Librarian—history of cartography, map librarianship

University of Washington

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1935 GRADUATE PROGRAM FOUNDED: 1935

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 8 M.A., 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 44 M.A. 20 Ph.D.
NOT IN RESIDENCE: 8 M.A. 8 Ph.D.

CHAIRMAN: Richard L. Morrill

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor William Beyers, Graduate Advisor, Department of Geography, University of Washington, Seattle, Washington 98195
Telephone (206) 543-5843

PROGRAMS AND RESEARCH FACILITIES: In order to provide the degree of specialization essential to contemporary graduate training in geography, the Department, in its graduate program, emphasizes the major systematic and technical fields of study, and a selected number of foreign areas.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: University of Washington operates on the quarter system. Admission to the Graduate School requires a minimum grade point averge of *B* (3.00 on a four-point scale) during the Junior and Senior years. Students holding the Master's degree must meet this minimum scholastic requirement, but should also have achieved a higher than *B* average for graduate studies completed. Other information to be provided by prospective students will be indicated by a more detailed statement available from the Graduate Program Advisor.

THE FACULTY

William B. Beyers, Ph.D., Washington, 1967, Associate Professor (also Graduate Program Advisor)—regional science, economic geography, location theory, regional analysis, environment of the Pacific Northwest

Kuei-sheng Chang, Ph.D., Michigan, 1955, Associate Professor (also School of International Studies)—economic geography of China, historical geography of exploration, Third World development

Douglas K. Fleming, Ph.D., Washington, 1965, Associate Professor (also Undergraduate Advisor)—transportation geography (especially ocean and air), regional organization of Western Europe

David C. Hodge, Ph.D., Pennsylvania State, 1975, Assistant Professor—urban geography (especially social and political aspects), spatial equity, research methods

W. A. Douglas Jackson, Ph.D., Maryland, 1953, Professor (also School of International Studies)—political systems, nature and culture, Soviet Union, Canada

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George H. Kakiuchi, Ph.D., Michigan, 1957, Associate Professor (also School of International Studies)—Japan, agriculture, internal migration, regional geography

Jaime C. Kooser, Ph.D., UC Berkeley, 1980, Assistant Professor—public facility location theory, time geography, social geography, energy policy, resource development

Günter Krumme, Ph.D., Washington, 1966, Professor—economic geography, regional economics, location theory, organization and decision theory, European regional development and planning

Marion E. Marts, Ph.D., Northwestern, 1950, Professor (also University Ombudsman)—water resources, conservation

Jonathan D. Mayer, Ph.D., Michigan, 1977, Assistant Professor—urban geography (including historical), transportation, medical geography, geographic philosophy and methods

Richard L. Morrill, Ph.D., Washington, 1959, Professor (also Department Chairman)—spatial organization, migration, diffusion and population, regional planning and development, inequality

John C. Sherman, Ph.D., Washington, 1947, Professor—cartography, graphics communication, remote sensing

Morgan D. Thomas, Ph.D., Queen's (Belfast), 1954, Professor (also Associate Dean for Academic Programs, The Graduate School)—regional economics, regional planning and development, technical innovation

Joseph Velikonja, Ph.D., University of Rome (Italy), 1948, Professor (also School of International Studies)—social and political geography, international migration, immigrants in America, Eastern Europe

Carl E. Youngmann, Ph.D., Kansas, 1972, Associate Professor—cartography, computer graphics, population

Craig ZumBrunnen, Ph.D., UC, Berkeley, 1973, Associate Professor (also School of International Studies)—natural resource management and conservation, environmental quality, methods of resource analysis, physical, Soviet Union

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Klein, Gail A. "The Expansion of Kentucky Fried Chicken and Wimpy in South Africa: A Study in the Diffusion of Innovation," 1979.* Mf., Univ. Microfilms.

Matthews, Olen Paul. "Legal Elements in the Mineral Development Decision Process," 1980.* Mf., Univ. Microfilms.

McCrea, Maureen. "Evaluation of Washington State's Coastal Management Program Through Changes in Port Development," 1980.* Mf., Univ. Microfilms.

Master's:

Calhoon, Craig. "Population Redistribution and Regional Economic Structure in the System of U.S. Metropolitan Regions, 1965–1975," 1979.

Gwarada, Nason. "Historical Development and Future Aspects of Agriculture in Zimbabwe," 1979.

Harrington, J. W. "Tan-Zam: Economic, Technological, and Political Perspectives on a New Transport Route," 1980.

Hollenbeck, Carol. "Open Space at the Urban Periphery," 1979.

Kirac, Tamer. "Formulating Regional Input-Output Models. A Case Study of Turkey," 1979.

O'Connor, Della. "Port Development in the People's Republic of China: A Geographical Perspective," 1979.

Trupiano, Bridget. "Spatial Variation in Soviet Living Standard: 1959–1975," 1979.

Yamanaka, Jody. "The Geography of the U.S. Air Cargo Industry," 1979.

Wayne State University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1921 GRADUATE PROGRAM FOUNDED: 1932

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 5

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 8

CHAIRPERSON: Robert D. Swartz

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairperson, Graduate Committee, Department of Geography, 225 State Hall, Detroit, Michigan 48202
Telephone (313) 577-2701

PROGRAMS AND RESEARCH FACILITIES: The graduate program emphasizes the education of professionals with a broad foundation in geography which will enable them to undertake successfully careers in research, teaching, and community service. Instruction is offered leading to the degree of Master of Arts by thesis or essay option. The core curriculum is followed by specialized work with emphasis on gaining practical experience while the student learns. The department's internship program allows limited credit to be earned for on-the-job training/experience. Applied geographic work in retail location analysis, land use planning and cartography is typical of internship positions.

Of many university-wide facilities, the following deserve special mention: the university and nearby public libraries which together contain more than 3.5 million volumes and 150,000 maps with outstanding special collections in urban affairs, ethnic studies, folklore, Eastern Europe, the Soviet Union, the History of Technology, and the Great Lakes region; the centers for Afro-American Studies, Black Studies, Urban Affairs, American Studies, Soviet and East European Studies, Instructional Technology, Business Research, and the Merrill-Palmer Institute.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:

To be admitted to the Department, an applicant should have an undergraduate major in geography or its equivalent, but intellectual ability, professional potential, and an abiding interest in geography are the main criteria for admission. Each application is judged individually and each program is tailored to the needs and desires of the individual student.

Several types of financial aid in the form of assistantships, fellowships, scholarships, work-study internships, and loans are available from the Department or the Graduate School. Departmental awards usually carry a minimum grant of $3500 and a waiver of tuition fees. Applications for financial aid for the 1981-82 academic year should be submitted before March 1, 1981.

STAFF:

Fred E. Dohrs, Ph.D., Northwestern, 1950, Professor—political, Soviet Union, Eastern Europe

Robert J. Goodman, Ph.D., Northwestern, 1948, Professor—visual techniques, historical

Judith I. Parkhurst, Ph.D., Illinois, 1975, Assistant Professor—geomorphology, physical environments, ecology, cartography

Robert Sinclair, Ph.D., Northwestern, 1955, Professor—economic-urban, Europe

Robert D. Swartz, Ph.D., Northwestern, 1967, Associate Professor and Chairperson—marketing, urban, Latin America

Bryan Thompson, Ph.D., Clark, 1971, Associate Professor—ethnic settlement, urban

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Beltchenko, Michael. "The Perceptions and Use of Windsor, Ontario by Detroit Area Residents: A Sample Survey," 1980.

Katarsky, Anthony Paul. "Growth of an Arabic Community: Northeast Dearborn, Michigan," 1980.

Lambert, Gordon Allen. "157 Years of Real Estate Subdividing and Urban Expansion in Oakland County, Michigan 1819-1976," 1979.

West Virginia University

DEPARTMENT OF GEOLOGY AND GEOGRAPHY

GRADUATE PROGRAM FOUNDED: 1971

DEGREES OFFERED: M.S.

GRANTED 7/1/79-6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 4
NOT IN RESIDENCE: 2

CHAIRMAN FOR GEOGRAPHY: Harley E. Johansen

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Department of Geology and Geography, West Virginia University, 305 White Hall, Morgantown, West Virginia 26506
Telephone (304) 293-5603

PROGRAMS AND RESEARCH FACILITIES: Graduate study in geography at West Virginia University offers the student a unique opportunity to tailor an interdisciplinary program of study to his or her interests. As part of a combined department with major strengths in geology (a Ph.D. program with over 65 students in residence), the geography faculty have emphasized the human aspects of environmental problems. Geography students are encouraged to design a program that combines some geology with geography and other disciplines in studying both applied and theoretical problems of resource development. Strengths of the faculty lie in the study of energy resource development and utilization, with emphasis on coal, and the social, economic, and environmental impacts of the coal energy system.

The university offers an excellent opportunity to study Appalachian and other developing regions through programs such as the Regional Research Institute, the University Extension Office of Research and Development, the College of Mineral and Energy Resources, and the West Virginia Geological and Economic Survey.

Departmental facilities include a large library of maps and air photos and equipment for aerial photography and remote sensing analysis plus access to good computing facilities for research activities. Office and research space is provided for graduate students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: West Virginia is on a semester system beginning in mid-August.

A bachelor's degree from an accredited college or university with a minimum grade point average of 2.5 is required, and 3.0 is recommended for financial aid. Students may be required to supply scores from the GRE. Graduate teaching and research assistantships are available on a competitive basis and pay approximately $3200 for nine months plus a tuition waiver.

STAFF IN GEOGRAPHY:

Frank J. Calzonetti, Ph.D., Oklahoma, 1977, Assistant Professor—spatial modeling, technology assessment, energy policy, resources

Gregory A. Elmes, Ph.D., Pennsylvania State, 1979, Assistant Professor—spatial modeling, transportation, resources, quantitative methods

Harley E. Johansen, Ph.D., Wisconsin, 1973, Associate Professor—economic, population, settlement and diffusion, rural development

Richard S. Little, Ph.D., Syracuse, 1961, Associate Professor—applications of information-system technology to regional planning and development, physical

Kenneth C. Martis, Ph.D., Michigan, 1976, Assistant Professor—political, resource and environmental policy, urban

Graham Rowles, Ph.D., Clark 1976, Assistant Professor—geography of the elderly, social, urban, planning

Ruth Anderson Rowles, M.S., Wisconsin, 1976, Instructor—cartography

ADJUNCT:

Robert E. Behling, Ph.D., Ohio State, 1971, Associate Professor of Geology—

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glacial geology, geomorphology, weathering in cold desert regions of Antarctica

Alan C. Donaldson, Ph.D., Pennsylvania State, 1959, Professor of Geology and Department Chairman—sedimentology, stratigraphy

Henry Rauch, Ph.D., Pennsylvania State, 1972, Associate Professor of Geology—hydrogeology and water quality, environmental geology

Western Illinois University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1917 **GRADUATE PROGRAM FOUNDED: 1947**

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 7

GRADUATE STUDENTS IN RESIDENCE: 20
NOT IN RESIDENCE: 5

CHAIRMAN: A. Richard Longwell

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Arlin D. Fentem, Chairman, Graduate Committee, Department of Geography, Tillman Hall, Western Illinois University, Macomb, Illinois 61455
Telephone (309) 298-1648

PROGRAMS AND RESEARCH FACILITIES: Students admitted to the program may select among three options: 1) thesis, 2) non-thesis, and 3) development plan/project report. With the first option, an oral examination follows the completion of the thesis. With the non-thesis option, there are both written and oral examinations following completion of coursework requirements; the examinations cover research design, theory and methodology, plus a world region and two systematic topics of the student's choice. With the third option, an oral examination follows the completion of the development plan/project report; the report having been prepared, typically, during an internship with an agency outside the University. All programs require 32 semester hours of credit, except that a concentration in regional and rural planning requires 38 semester hours.

The department offices, classrooms, and laboratories are in Tillman Hall, a modern, four-story, air-conditioned building. Internal facilities include the University Map Library, a reading room supplied with current geography periodicals, a well-equipped cartography laboratory, an earth materials testing laboratory, a remote computer terminal, a digitizer, a weather station, and a well-equipped remote-sensing laboratory. Also located in Tillman Hall is the Institute for Regional, Rural, and Community Studies which conducts research and planning for the western Illinois region and provides opportunities for practical experience. University facilities include a computer center (with Calcomp plotter); a field station on the Mississippi River; and a new million-volume library.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Western Illinois University operates on the Semester System and has both four-week and eight-week summer sessions. Admission requires that the applicant have a Bachelor's degree from an accredited institution and an overall gradepoint average of at least 2.5 (on a 4-point scale), or a grade-point of at least 2.75 for the last two years of undergraduate work. Applicants should have completed at least 24 semester hours of geography. The Graduate Record Examination is required.

Department graduate teaching, cartographic and editorial assistantships are awarded to 15 students each year, and an additional four to six students, usually in the second year of graduate study, are supported by public planning agencies in coöperation with the Institute for Regional Rural and Community Studies mentioned above. Assistants receive monthly stipends and their tuition charges are waived.

STAFF:

John J. Alford, Ph.D., Kansas, 1968, Professor—paleogeography, climatology

John V. Bergen, Ph.D., Indiana, 1964, Professor—map curator, human, Anglo-America

Ronald M. Beveridge, Ph.D., Illinois, 1958, Associate Professor—political, geographic thought and methodology, Middle East

John F. Blauvelt, M.S., Colorado, 1962, Assistant Professor—cultural, Middle East

Arlin D. Fentem, Ph.D., Wisconsin, 1974, Associate Professor—agricultural, Anglo-America, developing areas

Robert E. Gabler, Ed.D., Columbia, 1957, Professor—physical, geography in education, Europe

David W. Ganyard, Ph.D., Ohio State, 1967, Associate Professor—economic, historical, Africa

Donald W. Griffin, Ph.D., Clark, 1963, Professor—urban geography-regional planning, rural development

Fred E. Kohler, Ph.D., Ohio State, 1971, Associate Professor—water resources, climatology, meteorology

Lawrence T. Lewis, Ph.D., Clark, 1971, Associate Professor—quantitative methods, urban

A. Richard Longwell, Ph.D., Nebraska, 1974, Associate Professor—field methods, Middle America

Ronald E. Nelson, Ph.D., Nebraska, 1970, Professor—historical-cultural settlement, Soviet Union

Siyoung Park, Ph.D., Minnesota, 1977, Assistant Professor—urban, regional planning, geography of development

Richard L. Rieck, Ph.D., Michigan State, 1976, Assistant Professor—Pleistocene geomorphology, physical

Russell G. Swenson, Ph.D., Wisconsin-Milwaukee, 1977, Assistant Professor—cultural, environmental perception, human ecology

James W. Vining, M.A., Oklahoma, 1963, Associate Professor—conservation, soils

Robert T. Wilson, M.A., Western Illinois, 1971, Assistant Professor—cartography, biogeography, remote sensing

Daniel Wise, Ph.D., Ohio State, 1979, Assistant Professor—climatology, computer cartography, quantitative methods

TITLES OF THESES COMPLETED 7/1/79-6/30/80:
Master's:

Alger, Mark. "Regional Economic Development: The Interrelationship of the Accomplishments of Four Federal Programs," 1979.

Crosswell, Peter L. "An Investigation of the Drainage Pattern in the Lamoine River Basin, Western Illinois," 1980.

Fleischacker, Bernard. "Pheasants and Land Use in South Dakota," 1979.

Herbally, Stephen Francis. "Energy Development on the Northern Great Plains: Mercer County, North Dakota," 1980.

Western Kentucky University

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

DATE FOUNDED: 1907 GRADUATE PROGRAM FOUNDED: 1967

DEGREES OFFERED: M.S., M.A. in Education with a Geography Major, Master of Public Service in City and Regional Planning

GRANTED 7/1/79-6/30/80: 13

GRADUATE STUDENTS IN RESIDENCE: 21
NOT IN RESIDENCE: 7

HEAD: Wayne L. Hoffman

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Mark Lowry II, Graduate Studies Advisor, Department of Geography and Geology, Western Kentucky University, Bowling Green, Kentucky 42101
Telephone (502) 745-4555/6

PROGRAMS AND RESEARCH FACILITIES: The topical emphases in Western Kentucky University's graduate geography programs include social, physical, urban, and economic geography, and city and regional planning. Regional emphases are possible in Africa, Latin America, and North America.

Programs and Requirements—The Master of Science Degree, designed to prepare students for a variety of jobs and to become candidates for the Ph.D., requires a minimum of thirty semester hours of coursework, a thesis (or additional coursework in lieu of a thesis), plus either a reading knowledge of one language (French, German, or Russian) or a demonstrated proficiency in quantitative techniques in geographical research.

The Master of Arts in Education Degree with a Geography Major requires a minimum of twenty-one hours in geography and nine hours of education courses.

The department also administers the Master of Public Service Degree in City and Regional Planning, an interdisciplinary program designed to train public officials for service at local and state levels.

Graduates of the Geography and Planning Program are serving in a variety of discipline-related jobs around the country, and some are in both geography and planning Ph.D. programs in several major universities.

Research facilities in new quarters include all standard laboratories, closed-circuit TV, a CDC computer terminal and access to a 360–40 computer, the College Heights Weather Station and State Climatology Center, a map library, and the university's graduate library.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admission Requirements:* An undergraduate degree with G.P.A. of 2.8 or higher (on a 4.00 scale), or a combined GRE score of 800. Semester System. *Financial Aid:* A number of teaching and research assistantships are available with stipends ranging between $2700 and $3000 for the academic year.

STAFF:

S. Reza Ahsan, Ph.D., Florida, 1963, Professor—cartography, air photo interpretation, remote sensing, Latin America, Eastern Africa

James M. Bingham, M.A., Memphis State, 1965, Ph.D. candidate, Indiana State, Assistant Professor—economic, urban, city and regional planning, Southeastern United States

W. Willard Cockrill, M.S., Peabody College, 1947, Ph.D. course work, Tennessee, Professor—meteorology, conservation, historical, Europe

Doral Glen Conner, M.S., Western Kentucky, 1976, Assistant Professor—geomorphology, aviation meteorology; State Climatologist

Nicholas Charles Crawford, Ph.D., Clark, 1977, Associate Professor—geomorphology, hydrology, climatology

James L. Davis, Ph.D., Northwestern, 1964, Professor and Associate Dean of the Faculties—urban transportation, economic, North America

Ronald R. Dilamarter, Ph.D., Iowa, 1972, Professor—geomorphology, cartography, karst studies

Edmund E. Hegen, Ph.D., Florida, 1962, Professor and Director of International Projects—regional development, conservation of resources, geographic thought, Latin America

Wayne L. Hoffman, Ph.D., Florida, 1970, Professor and Head—city and regional planning, urban, economic

Mark Lowry II, Ph.D., Syracuse, 1973, Professor and Graduate Advisor—city and regional planning, urban, social

Tyrel G. Moore, M.S., Tennessee, 1975, Ph.D. candidate, Tennessee, Instructor—historical, city and regional planning, cultural

Albert J. Petersen, Ph.D., Louisiana State, 1970, Associate Professor—cultural, geographic education, geographic thought, Great Plains

Claude E. Pickard, Ph.D., Nebraska, 1969, Professor—economic, settlement patterns, manufacturing, North America

James W. Taylor, Ph.D., Indiana, 1955, Professor—physical, population, South Asia

Western Michigan University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1905 GRADUATE PROGRAM FOUNDED: 1964

DEGREES OFFERED: M.A., M.A.T.

GRANTED 7/1/79–6/30/80: 3

GRADUATE STUDENTS IN RESIDENCE: 13
NOT IN RESIDENCE: 7

CHAIRMAN: Joseph P. Stoltman

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Charles F. Heller, Graduate Adviser, Department of Geography, Western Michigan University, Kalamazoo, Michigan 49008
Telephone (616) 383-1835

PROGRAMS AND RESEARCH FACILITIES: The M.A. degree program in Geography provides a solid foundation in the subject and at the same time permits specialization. Thirty hours of approved graduate credits must be completed, with at least twenty hours in geography. All students take seven hours of core courses in Geographic Research and Quantitative Methodology, then develop a three-course concentration (minimum) in one of five areas: Community Development and Planning, Economic and Urban Geography, Environmental and Resource Analysis, Physical Geography, or one of four regional specialties.

A 30-hour M.A.T. degree program in Geography is designed to improve the classroom teacher's competencies in the teaching of geography. Substantive content in geography and related disciplines is combined with professional development in elementary or secondary education.

The Department possesses fully-equipped cartography, aerial photo, and quantitative laboratories which include a map enlarger, lettering and scribing equipment, reproduction and darkroom facilities, sketch masters, height finders, mirror stereoscopes, electronic desk calculators, an electronic analog computer, CRT and hard-copy remote terminals.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Graduate courses are concentrated in the Fall and Winter semesters, although graduate study may be accelerated by utilizing fully the trimester schedule of the University. Students with a 2.7 grade-point average (A = 4.0) during the last four semesters of undergraduate work are eligible for admission to the program. University and Departmental Harrison Fellowships with no duties are available to highly-qualified students, and a number of Graduate Assistantships are granted to eligible students each year. Assistantships coincide with the Fall and Winter semesters (September through April), and in 1980–81 they will pay $4000. Applications for financial assistance must be supported by two letters of recommendation and transcripts of undergraduate work. All Fellows and Assistants are provided office space, and the same is normally true for all other graduate students.

STAFF:

David G. Dickason, Ph.D., Indiana—economic development, quantitative methods, South Asia
Val L. Eichenlaub, Ph.D., Ohio State—climatology, Anglo-America, physical
Rainer R. Erhart, Ph.D., Illinois—remote sensing, physical, biogeography
Charles F. Heller, Ph.D., Illinois—socioeconomic, urban social, historical
George F. Hepner, Ph.D., Arizona State—land use analysis, quantitative analysis, environmental problems
Thomas W. Hodler, Ph.D., Oregon State—cartography, hydrology, remote sensing
Oscar H. Horst, Ph.D., Ohio State—physical landscapes, peasant societies, Latin America
Eugene C. Kirchherr, Ph.D., Northwestern—urban, planning and zoning, Subsaharan Africa
Philip P. Micklin, Ph.D., Washington—U.S.S.R., conservation, environmental impact assessment
Eldor C. Quandt, Ph.D., Michigan State—population, Scandinavia, ethnic studies
Henry A. Raup, Ph.D., Illinois—national parks, conservation, Western Europe
Joseph P. Stoltman, Ed.D., Georgia—geographic education, cultural, Latin America
George Vuicich, Ph.D., Iowa—geographic education, urban, quantitative methods

Western Washington University

DEPARTMENT OF GEOGRAPHY AND REGIONAL PLANNING

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.S.

GRANTED 7/1/79–6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 16

CHAIRMAN: James W. Scott

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. James W. Scott, Department of Geography and Regional Planning, Western Washington University, Bellingham, Washington 98225
Telephone (206) 676–3278

PROGRAMS AND RESEARCH FACILITIES: Seminars, supporting courses and a thesis or two research papers emphasize cultural or physical geography in the M.S. program. The department offers special master's program concentrations in Urban and Regional Planning. The department has an extensive map collection organized by a full-time curator; a media laboratory under the direction of a staff cartographer; a cartographic laboratory; graduate research room; graduate offices; departmental Tektronix vector graphics terminal, Tektronix interactive digitizing plotter and Calcomp plotter; and access to the university's IBM 360/50 computer and interactive terminal system.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Quarter system, including summer. An undergraduate major in geography with grade point average 3.0 (4-point system) or better is normally required for admission to graduate degree status. Teaching assistant stipends are $3738 for the academic year; application deadline March 15, 1981. This deadline is especially important to those who apply for financial assistance. In addition the department has three scholarships it disburses each year; one for $1,000 and two tuition scholarships, presently valued at $618. Application for these is required by April 15, 1981.

STAFF:

Janet R. Collins, B.S., Western Washington, 1974, Map Curator

Howard J. Critchfield, Ph.D., Washington, 1952, Professor—climatology, Southwest Pacific (Washington State Climatologist)

Eugene A. Hoerauf, M.A., Oregon, 1969, M. Libr., Washington, 1976, Cartographer

Kenneth J. Langran, Ph.D., Wisconsin, 1979, Assistant Professor—quantitative methods, remote sensing, computer cartography

Robert L. Monahan, Ph.D., McGill, 1959, Professor—resources, Northlands (Director, Canadian-American Studies) (on leave 1980–81)

Debnath Mookherjee, Ph.D., Florida, 1961, Professor—South Asia, planning (Director, Urban and Regional Planning Program)

Gilbert A. Peterson, Ph.D., Washington, 1975, Associate Professor—regional planning, computer graphics

Franklin C. Raney, Ph.D., UC, Davis, 1962, Associate Professor—water resources, biogeography, soils

James W. Scott, Ph.D., Indiana, 1971, Associate Professor—historical, population (Director, Center for Pacific Northwest Studies)

Richard G. Smith, Ph.D., Wisconsin, 1965, Associate Professor—landforms, United States, Canada, Arctic, conservation

Thomas A. Terich, Ph.D., Oregon State, 1973, Associate Professor—urban and regional planning, physical, coastal studies

Robert W. Teshera, Ph.D., Washington, 1970, Associate Professor—political, United States, Canada

Manfred C. Vernon, J.D., Berlin, Ph.D., Stanford, Professor Emeritus, Honorary Lecturer in Political Geography

ADJUNCT FACULTY:

Richard H. Berg, Ph.D., Washington, 1970, Associate Professor—remote sensing, quantitative methods

University of Wisconsin

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1928 GRADUATE PROGRAM FOUNDED: 1928

DEGREES OFFERED: M.S. (Geography), M.S. (Cartography),
Ph.D., (Geography)

GRANTED 7/1/79–6/30/80: 8 M.S., 7 M.S. (Cartography), 4 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 22 M.S. 13 M.S. (Cart.) 23 Ph.D.
NOT IN RESIDENCE: 8 M.S. 7 M.S. (Cart.) 15 Ph.D.

CHAIRMAN: William M. Denevan

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Committee on Graduate Appointments, Department of Geography, The University of Wisconsin, Madison, Wisconsin 53706
Telephone (608) 262-2138 (Department)
(608) 262-3861 (Graduate Office)

PROGRAMS AND RESEARCH FACILITIES: The Department offers a broad range of programs in systematic and regional geography, and a separate M.S. program in cartography. The Department cooperates freely in both graduate instruction and research guidance with numerous other departments of the University. It plays an active role in such interdisciplinary programs as African Studies, American Institutions, Asian Studies, Ibero-American and Luso-Brazilian Studies, Population Studies, and Urban and Regional Planning, Environmental Studies, and Water Resources.

An unusual variety of facilities for graduate study and research exists in Madison. Grouped conveniently in Science Hall with the Geography Department are the Geography Library, the University's Map and Air Photo Library, the Cartographic Laboratory, and a geomorphology laboratory. Only a few hundred yards separate Science Hall from the Central University Library and the State Historical Society Library. Nearby are specialized reference libraries and the main computing center of the University. Madison, the state capital, houses most divisions of the state government and several federal agencies.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The types of financial assistance include the following appointments:

Teaching Assistantships: Duties ordinarily include about 5 to 8 hours per week of classroom teaching, for which the salary currently ranges from about $4250 to $6715 for the academic year.

Project and Research Assistantships: Duties involve the assistance of either staff members in their research projects or under the supervision of the Director of the University Cartographic Laboratory. Such duties aggregate not more than 20 hours per week. The salaries currently range from $4600–$6288.

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University Fellowships: These awards, requiring no departmental duties, are available through a competitive program administered by the Graduate School. They yield about $5886 for the academic year, plus remission of nonresident tuition fees. Advanced Opportunity (Minority) Fellowships are also available.

Departmental Fellowships: The Department awards two Whitbeck Fellowships.

Appointments are usually for 9 months (September to June, inclusive) and holders normally are exempt from the non-residence tuition fee which currently is $1317.00 per semester, although they must still pay fees which are currently $618.50 per semester.

STAFF:

Waltraud Brinkmann, Ph.D., Colorado, 1973, Associate Professor—climatology, natural hazards (also Institute for Environmental Studies)

Reid Bryson, Ph.D., Chicago, 1948, D.Sc., Denison, 1971, Professor—climatology, environmental science (also Meteorology; Director, Institute for Environmental Studies)

Martin T. Cadwallader, Ph.D., UCLA, 1973, Associate Professor—urban, economic, quantitative analysis

William M. Denevan, Ph.D., UC, Berkeley, 1963, Chairman and Professor—cultural ecology, humid tropics, historical, Latin America

Daniel F. Doeppers, Ph.D., Syracuse, 1972, Associate Professor—urban-social, Southeast Asia, historical

Francis D. Hole, Ph.D., Wisconsin, 1943, Professor—soils, conservation, Wisconsin (also Soil Science)

Carol B. Jenner, Ph.D., Maryland, 1975, Assistant Professor—climatology, quantitative methods

James C. Knox, Ph.D., Iowa, 1970, Professor—geomorphology, paleohydrology (also Institute for Environmental Studies; Director, Center for Geographic Analysis)

Joel L. Morrison, Ph.D., Wisconsin, 1968, Professor—cartography, mapping

Phillip C. Muehrcke, Ph.D., Michigan, 1969, Professor and Director, U.W. Cartographic Laboratory—cartography, mapping

Daniel R. Muhs, Ph.D., Colorado, 1980, Assistant Professor—soils, geomorphology

Clarence W. Olmstead, Ph.D., Michigan, 1951, Professor—agriculture, United States, Canada

Robert C. Ostergren, Ph.D., Minnesota, 1976, Assistant Professor—history, conservation, Northern Europe

Robert D. Sack, Ph.D., Minnesota, 1970, Associate Professor—political, economic, geographic thought

Randall D. Sale, M.S., Wisconsin, 1953, Professor—cartography, mapping (also Associate Director, U.W. Cartographic Laboratory)

Clare Stapleton, Ph.D., Northwestern, 1977, Assistant Professor—applied economic, population

Thomas R. Vale, Ph.D., UC, Berkeley, 1973, Associate Professor—biogeography, natural resources

David Ward, Ph.D., Wisconsin, 1963, Professor—historical, urban, social, North America, Europe

Benjamin Wisner, Ph.D., Clark, 1977, Assistant Professor—Africa, development

David Woodward, Ph.D., Wisconsin, 1970, Associate Professor—cartography, mapping, history of cartography
George H. Dury, Professor Emeritus
Richard Hartshorne, Professor Emeritus
Arthur H. Robinson, Professor Emeritus
Henry S. Sterling, Professor Emeritus
Glenn T. Trewartha, Professor Emeritus

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:
Ph.D.:

Langran, Kenneth, J. "International Water Quality Management: The Rhine River as a Study in Transfrontier Pollution Control," 1979. Mf., Univ. Microfilms.

McDowell, Patricia F. "Stream Activity and Climatic Change during the Holocene," 1980. Mf., Univ. Microfilms.

Melcon, Paul Z. "Processes Responsible for Iron-Indurated Crusts in Dane County, Wisconsin," 1979. Mf., Univ. Microfilms.

Parker, Albert J. "Environmental, Compositional and Structural Gradient Analysis of Two Montane Forests in Western North America," 1980. Mf., Univ. Microfilms.

M.S.:

Brouwer, Onno. "Innovations on Charts of the Western World Which Made Them More Acceptable as Aids in Navigation," 1980.

O'Brien, Robert. "Channelization: Some Geomorphic Concepts," 1979.

University of Wisconsin—Milwaukee

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1956 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A., M.S., Ph.D.

GRANTED 7/1/79–6/30/80: 6 Masters, 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 17 Masters 13 Ph.D.
NOT IN RESIDENCE: 15 Masters 16 Ph.D.

CHAIRMAN: Donn K. Haglund

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Administrative Committee, Department of Geography, University of Wisconsin-Milwaukee, Milwaukee, Wisconsin 53201
Telephone (414) 963–4866

PROGRAMS AND RESEARCH FACILITIES: Areas of faculty strength and emphasis are urban geography, climatology, Latin America, and Europe and the U.S.S.R. Research by staff members and students on North America and the Northern Lands, and in terrain morphometry, regional geomorphology, soils geography,

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biogeography, cartography, settlement geography, maritime cultural geography, and the geography of the humid tropics is also pursued actively.

The research programs in urban geography emphasize city-region relationships, internal structure, comparative urban geography and historical evolution of cities and metropolitan areas, as well as relations of urban functions and land uses to transportation and metropolitan planning. The Department of Urban Affairs and The School of Architecture and Urban Planning as well as the Urban Research Center, strengthen geographical work in the urban field.

Training in climatology is supported by the standard courses in meteorology and hydrology. Available facilities include radiation-detecting and other meteorological equipment, a field station which includes a variety of ecosystems, and the Center for Great Lakes Studies. Research is being conducted currently on the climates of the Soviet Union, on energy and water budgets, air pollution, long range forecasting, and climatic change.

Emphases in Latin America are historical (European discovery and exploration), rural and abandoned settlements, agricultural, and the humid tropics. Research is assisted by a campus Center for Latin American Studies. Current research by staff and graduate students is being pursued in Argentina, Brazil, Colombia, Ecuador, Mexico, and Venezuela.

The Europe and U.S.S.R. program, supported by an undergraduate Certificate Program in Russian and East European Studies, involves both topical and regional analysis, with considerable emphasis on climate and population of the U.S.S.R., urban geography of West Germany, and comparative analysis of the East European countries.

The Department has an excellent Soils Laboratory, Cartographic and Remote Sensing Laboratory, and a Map Library, and computer facilities. The American Geographical Society Collection containing 600,000 items, including many rare items, is now housed at UWM, and is open to everyone without charge.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system, fall semester ending before Christmas; summer session. About six teaching assistantships (stipend currently $4722 to $4878 for 33.3% positions); students may compete for University of Wisconsin Fellowships (stipend currently $5714). There are also opportunities for Research and Project Assistantships, and non-resident tuition remission fellowships.

STAFF:

Karel Bayer, Ph.D., Charles University, Prague, 1960, Associate Professor—meteorology, dynamics of climate, Great Lakes research, urban climatology

Barbara Borowiecki, Ph.D., Wisconsin, 1962, Professor—terrain morphometry, regional geomorphology, Eastern Europe

Michael Day, Ph.D., Oxford, 1979, Assistant Professor—geomorphology, biogeography, environmental analysis

Clinton R. Edwards, Ph.D., UC, Berkeley, 1962, Professor—historical, maritime, Latin America

Robert C. Eidt, Ph.D., UCLA, 1954, Professor—rural settlement, Latin America, geochemistry, soils geography

Robert Ericksen, Ph.D., Iowa, 1980, Assistant Professor—quantitative and spatial analysis, computer cartography

James J. Flannery, Ph.D., Wisconsin, 1956, Associate Professor—cartography, remote sensing, geography education

Donn K. Haglund, Ph.D., Pennsylvania, 1958, Associate Professor—economic, Canada, the Arctic

Lutz Holzner, Dr. rer. nat., Wurzburg, 1964, Professor—urban, Western Europe, comparative urban

Frank E. Horton, Ph.D., Northwestern, 1966, Professor and Chancellor—urban, quantitative

Harold M. Mayer, Ph.D., Chicago, 1943, Professor (also Center for Great Lakes Studies)—urban, transportation, city and metropolitan planning, North America

David H. Miller, Ph.D., UC, Berkeley, 1953, Professor—meteorology, hydrology (joint appointment with Geological Sciences)

Harold M. Rose, Ph.D., Ohio State, 1960, Professor—population, behavior in the urban environment

Norman R. Stewart, Ph.D., UCLA, 1963, Associate Professor—pioneer settlement, Latin America

Ruth Stoveken, M.S., Wisconsin, 1947, Assistant Professor Emerita

John C. Weaver, Ph.D., Wisconsin, 1942, Professor Emeritus

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Pettiway, Leon. "A Geographical Description of Robbery and Burglary Offense Locations in Milwaukee County," 1979.

Master's:

Baruth, Chris. "Mapping of Wisconsin Since 1832," 1980.

Bond, Andrew. "Inter-republic Variations in Ukrainian and Belorussian Russianization, 1959-1970," 1979.

Hermanson, Mark. "The Urbanization of a Small Waterway: A Battle Creek Study Case," 1980.

Miller, David. "The European Impact on St. Vincent, 1600-1763: Suppression and Displacement of the Native Population and Landscapes," 1979.

Mueller, Paul. "Locational Behavior of Manufacturing Establishments: 1947-1979," 1980.

Reynolds, Bill. "Change on the Milwaukee Urban Fringe: The Case of Four Washington County Hamlets," 1980.

University of Wyoming

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A., M.S.T., M.P.

GRANTED 7/1/79-6/30/80: 3

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 25

HEAD: Phillip M. Fowler

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Professor Phillip M. Fowler, Head, Department of Geography, University of Wyoming, Laramie, Wyoming 82071
Telephone (307) 766-3311

PROGRAMS AND RESEARCH FACILITIES: At Wyoming the M.A. and M.S.T. graduate programs are individually designed for specialized training or structured for disciplinary breadth. In addition to training in methods of geographic research, regional study, cartography, quantitative spatial analysis, and air photo, the Department emphasizes systematic specializations in urban-economic, political, physical, paleoenvironments, population-cultural, and an environmental option. In the latter case Wyoming is ideally located and equipped for research in environmental problems. In response to growing needs, a new program in environmental and resource management has been added to the Department's curriculum. A combination of courses in geography, economics, law, natural sciences, recreation, and related fields provides an excellent interdisciplinary framework for this program. Its flexibility enables students to investigate a variety of critical problems in resource management such as land use planning for public lands; wildlife management, and the effect of energy resource development on environmental quality.

A training program in *Community and Regional Planning* was initiated in Fall 1975. The program is an interdisciplinary effort, involving various colleges and departments of the University; it is administered in the Geography Department. Program emphasis is on preparing individuals to function as effective regional, community, or environmental planners in Wyoming and other Rocky Mountain states. The degree that is earned in this program is the *professional* "Master in Planning" degree.

The Department has rapidly developing facilities for work in cartography, geomorphology, biogeography and environmental studies. An extensive library of computer programs, in conjunction with the Department's collection of aerial photographs and U.S.G.S. quadrangles at the 7 1/2 and 15 minute series, provides opportunities for geographic research in a variety of topics. In addition, the University of Wyoming's outstanding collection of western archival materials is available for research in historical geography.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan*—Plan A, with Thesis. Plan B with 2 papers. M.S.T. with one paper. *Admission Requirements*—Applicants evaluated on an individual basis. Undergraduate backgrounds in the social or natural sciences and the humanities accepted. Deficiencies can be remedied during the graduate program. *Financial Aid*—3 full-time Graduate Assistantships, paying a minimum of $4500 plus remission of tuition fees. *Semester System* —At least 2 semesters in residence.

STAFF:

Ronald Beiswenger, Ph.D., Michigan, 1972, Associate Professor—conservation, environmental studies, world resources, biogeography

Hans Bleiker, Ph.D., M.I.T., 1972, Associate Professor—community and regional planning, problem-solving, decision-making processes

Robert H. Brown, Ph.D., Chicago, 1957, Professor—political and settlement geography, Wyoming, geographic thought

Deborah L. Elliott, Ph.D., Colorado, 1979, Assistant Professor—biogeography, field methods, arctic and alpine, environmental history

Phillip M. Fowler, Ph.D., Iowa, 1969, Associate Professor—urban, quantitative methods, economic

Lawrence M. Ostresh, Ph.D., Iowa, 1973, Associate Professor—theoretical human, quantitative methods, urban-economic, cartography

Richard G. Reider, Ph.D., Nebraska, 1971, Associate Professor—soils, geomorphology, climatology

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Boyd, Thomas Lee. "Paleopedology of the Agate Basin Archeological Site, Eastern Wyoming," 1980.*

Helmuth, Richard A. "The Changing Outdoor Recreational Landscape of Routt County, Colorado," 1979.*

McFaul, Michael. "Geomorphic and Pedologic Investigation of the Mima Mounds, Washington State," 1979.*

CANADIAN UNIVERSITIES

University of Alberta

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1957 GRADUATE PROGRAM FOUNDED: 1960

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/79–6/30/80: 24 Masters, 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 31 Masters 16 Ph.D.
NOT IN RESIDENCE: 19 Masters 1 Ph.D.

CHAIRMAN: R. Geoffrey Ironside

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Department of Geography, University of Alberta, Edmonton, Alberta, Canada T6G 2H4
Telephone (403) 432–3274

PROGRAMS AND RESEARCH FACILITIES: Individual graduate programs vary with the interests and training of the candidate. Minimum programs comprise three full-year courses for M.A./M.Sc. candidates who have completed four-year specialized degrees, and one course for Ph.D. candidates. A thesis is required of all graduate students, but there are no formal language requirements. All M.A./M.Sc. candidates must complete a course in cartography (if they have not previously done so) and a course in research methods.

In addition to access to a major library and computing center, research facilities include very generous photographic, cartographic and computing services; the University Map Collection; the Boreal Institute; research labs (geomorphology, population); and meteorological instrumentation near Edmonton.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* The teaching year extends from early September to mid-April, and is divided into two terms broken at Christmas. Some courses extend over the full period, but most are only half-year (one term).

Admission Requirements: A baccalaureate degree with at least second-class standing (65%) in the last two years of undergraduate work, and the approval of the Department. *Financial Aid:* (1) Fellowships, Scholarships and Bursaries—Supported by University, Provincial and foundation funds. Valued at up to $4800 for master's candidates, and up to $7500 for doctoral candidates. (2) Graduate Assistantships—Valued at $4520 to $6656 dependent on qualifications. Approximately 12 hours per week on departmental duties is required during the 8-month academic year. (3) Intersession Bursaries—A certain number, valued at $1880, are available to support thesis research by resident graduate students. (4) Additional assistance—Available periodically from various agencies in connection with departmental and faculty research projects.

STAFF:

John F. Bergmann, Ph.D., UCLA, 1959, Associate Professor—historical, Latin America

Michael C. Brown, Ph.D., McMaster, 1970, Associate Professor—karst geomorphology, microclimatology

Ian A. Campbell, Ph.D., Colorado, 1968, Professor and Chairman—fluvial processes, arid lands

Robert B. Charlton, Ph.D., Toronto, 1970, Associate Professor—meteorology

John H. England, Ph.D., Colorado, 1974, Associate Professor—glacial and periglacial circumpolar Quaternary environment, Canadian arctic islands

Kenneth J. Fairbairn, Ph.D., Melbourne, 1968, Associate Professor—socioeconomic studies, consumer behavior

Keith D. Hage, Ph.D., 1957, Chicago, Professor—meteorology

M. John Hodgson, Ph.D., Toronto, 1973, Associate Professor—location/allocation analysis, quantitative methods

R. Geoffrey Ironside, Ph.D., Dunelm, 1965, Professor—industrial location policy, rural planning

Edgar L. Jackson, Ph.D., Toronto, 1974, Assistant Professor—natural hazards, perceptions and attitudes, recreation

Denis B. Johnson, Ph.D., Belfast, 1969, Associate Professor—intra-urban studies, documentary film making

Leszek A. Kosinski, Ph.D., Warsaw, 1958, Professor—population, Eastern Europe

Arleigh H. Laycock, Ph.D., Minnesota, 1957, Professor—hydrology and water resources

Edward P. Lozowski, Ph.D., Toronto, 1970, Associate Professor—meteorology

Harold J. McPherson, Ph.D., McGill, 1967, Professor—mountain geomorphology, environmental quality, natural hazards

Jean-Claude Muller, Ph.D., Kansas, 1974, Associate Professor—analytical cartography, computer graphics

R. Bruce Rains, Ph.D., Alberta, 1969, Associate Professor—fluvial, glacial geomorphology, air photo interpretation

Erhard R. Reinelt, Ph.D., Alberta, 1964, Professor—meteorology

Neil R. M. Seifried, Ph.D., Washington, 1969, Associate Professor—industrial location, urban and regional growth

John Shaw, Ph.D., Reading, 1969, Professor—glacial geomorphology, sedimentology

O. F. George Sitwell, Ph.D., Toronto, 1968, Associate Professor—history of geography, cultural landscape

Peter J. Smith, Ph.D., Edinburgh, 1964, Professor—political urban geography, urban planning theory and history

S. Ivan Smith, Ph.D., McGill, 1963, Associate Professor—applied climatology, tropical world, Africa, agricultural resources

William C. Wonders, Ph.D., Toronto, 1951, Professor—settlement, Northern Lands

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Monanu, Patience. "Optimal Patterns for the Transportation of Export Commodities within Nigeria," 1980. Mf., National Library.

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Master's:

Ashmore, Peter. "Laboratory Modelling of Braided Streams," 1979. Mf., National Library.

Broszkowski, Jerry. "Meteorological Applications of Empirical Orthogonal Functions," 1979. Mf., National Library.

Cross, Robert. "Application of Satellite Infra-Red Data in the Derivation of Sea-Surface Temperatures in the Canadian Arctic," 1979. Mf., National Library.

deLorenzis, Bruno. "Time-Dependent Behaviour of Ice Accretion of a Non-Rotating Cylinder," 1979. Mf., National Library.

diCenzo, Colin. "A Numerical Study of Temperature in an Urban Valley Using a Radiative-Conductive Model," 1979. Mf., National Library.

English, Michael. "Some Aspects of the Ecology and Environment of the Slave River Delta, N.W.T.," 1979. Mf., National Library.

Gahr, Gary. "Sherwood Park: Residents' Attitudes Toward A Dormitory Satellite of Edmonton," 1979. Mf., National Library.

Garrett, Denzil. "The Northern Alberta Railway: A Geographical Analysis," 1980. Mf., National Library.

Gilham, Dwayne. "The Consumer Spatial Behavior of Edmonton's Inner City Residents, 1977," 1979. Mf., National Library.

Glover, Brian. "Late Quaternary River Terrace Evolution in Part of the Athabasca River Valley," 1979. Mf., National Library.

Graden, Robert. "Planning of New Residential Areas in Edmonton 1950–1976," 1979. Mf., National Library.

Hopkinson, Rolf. "Weather Map Types and Associated Cloud Distribution Over Alberta and British Columbia in 1975," 1980. Mf., National Library.

Kroening, Leslie. "Motivations of Wilderness Canoeists," 1979. Mf., National Library.

MacKenzie, Frank. "Thermal Power Plant Waste Heat Utilization in Alberta: Potential and Problems," 1979. Mf., National Library.

Mallandaine, Ann. "The Effect of Land Uses on Lake Water Quality, Sturgeon Lake, Alberta," 1980. Mf., National Library.

Martz, Lawrence. "Sediment Yield of Spring Creek Watershed, Alberta," 1979. Mf., National Library.

Niemann, Olaf. "Channel Patterns of the Upper Red Deer River, Alberta, Canada," 1979. Mf., National Library.

Rudolph, Randell. "A Numerical Model of Pollutant Transport in a Small Urban Valley," 1980. Mf. National Library.

Staite, Peggy. "Flood Plain Management in the Drumheller Valley: Alternative Land Use Policies," 1979. Mf., National Library.

Thomson, Kenneth. "Coastal Erosion in Part of the Bay of Fundy, Nova Scotia," 1979. Mf., National Library.

Von Gaza, Hartmut. "Minimum Cost Paths for Inhomogeneous Cost Surfaces," 1980. Mf., National Library.

Wong, Robert. "Conflict Between Cross-Country Skiers and Snowmobilers in Alberta," 1979. Mf., National Library.

Wright, David. "The Physical Geography of the Rabbitkettle Hot Springs, Nahanni National Park, N.W.T.," 1980. Mf., National Library.

Wyllie, Donald. "An Investigation of the Role of Self-Esteem in Adolescent Leisure Behavior," 1979. Mf., National Library.

University of British Columbia

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1923 GRADUATE PROGRAM FOUNDED: 1947

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/79–6/30/80: 11 Masters, 4 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 20 Masters, 12 Ph.D.
NOT IN RESIDENCE: 6 Masters, 4 Ph.D.

ACTING HEAD: J.D. Chapman

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Registrar's Office, University of British Columbia, Vancouver, B.C., Canada V6T 1W5. Further information: Department of Geography, University of British Columbia, Vancouver, B.C., Canada V6T 1W5
Telephone (604) 228-2020, 3246

PROGRAMS AND RESEARCH FACILITIES: M.A., M.Sc., Ph.D. Programs:

A. Physical Geography, Emphasizing Climatological and Geomorphological Processes—

  1. Climatology: heat and water balances of active surfaces; energy balances at the micro, synoptic and macro scales; urban climatology; synoptic climatology; solar energy.

  2. Geomorphology: energy and mass balance studies in the Coast Mountains and Lower Fraser Valley of B.C.; physical processes in alpine, sub-alpine, and arctic areas; permafrost.

B. Human Geography, Emphasizing Locational and Regional Analysis, and Humanistic, Behavioral and Ecological Approaches—

  1. Locational and Regional Analysis: Spatial organization and interaction including network studies; intraurban geography, emphasizing policy studies; regional structure, development and policy; resource use and allocation, especially the location and use of commercial energy.

  2. Humanistic, Behavioral and Ecological Approaches: historical studies with a humanistic emphasis of society and land in the light of changing values, perceptions and technology; social and behavioral studies of urban groups and urban spatial structures; ecological adaptations of land-based cultures, including past and present human ecology in Middle American lowlands.

The regional emphases of the department include Canada (especially western Canada and the Arctic); Southeast and East Asia (especially China); the Soviet Union and Eastern Europe; and Latin America. Courses are available in methodology, philosophy of geography, and techniques appropriate for research in a broad area.

Interdisciplinary Programs—Participation in the Arctic and Alpine, Hydrology, Resource Science, Urban and Transportation, Asian and Slavonic and International Studies programs of the University.

Field Studies—Ongoing projects in the Western Arctic and Cordilleran regions of Canada and special projects in Latin America. Field work may be supported under grants to faculty members.

Other Facilities—In department: Extensive map and air photo holdings of B.C.; considerable calculating capacity; geomorphological and climatological laboratory; office space for graduate students. In university: second largest library in Canada; access to AMDAHL 470 V/6, Model II computing system with mapping and graphic capabilities; Graduate Student Centre.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan*—Academic year, September 1-August 31. Two terms: September 1-December 21, January 3-April 30.

Admission Requirements—Honours or major degree in geography with at least upper Second Class Standing or a grade point average of 3.0 on a 4-point scale. Applicants from related fields will be considered.

Financial Aid—Scholarships: H.R. MacMillan fellowships and U.B.C. Graduate Faculty fellowships are open to superior students. Applications are made through the Head of the Department. Canada Council, Commonwealth, Ford Foundation, C.M.H.C. and D. of T. Fellowships are tenable at U.B.C. Applications are made directly to these organizations. Teaching assistantships with competitive stipends are available during the eight-month academic year (September to early May). There are other assistantships for the Summer Session.

STAFF:

M. J. Bovis, Ph.D., Colorado, 1974, Assistant Professor—geomorphology, snow avalanche hazards, statistical analysis

J. D. Chapman, Ph.D., Washington, 1958, Professor and Acting Head—economic (manufacturing and energy), philosophy of geography

M. Church, Ph.D., U.B.C., 1971, Associate Professor—geomorphology (on leave, 1979-80)

Richard Copley, M.A., UC, Berkeley, 1961, Senior Instructor—cultural/historical, East Asia

P. Dearden, Ph.D., Victoria, 1978, Visiting Assistant Professor—landscape evaluation and land use planning

K. Denike, Ph.D., Pennsylvania, 1973, Assistant Professor—urban, quantitative methods, transportation

J. S. Duncan, Ph.D., Syracuse, 1978, Assistant Professor—urban/social geography, South Asia

A. L. Farley, Ph.D., Wisconsin, 1960, Associate Professor—cartography, air photo interpretation, Pacific Northwest

Walter G. Hardwick, Ph.D., Minnesota, 1963, Professor—public aspects of urban development

R. C. Harris, Ph.D., Wisconsin, 1964, Professor—historical, Canada

John Hay, Ph.D., London, 1970, Associate Professor—climatology (solar radiation and synoptic)

David Ley, Ph.D., Pennsylvania State, 1972, Associate Professor—urban, social, theoretical

J. Ross Mackay, Ph.D., Montreal, 1949, Professor—arctic geomorphology, cartography, Canadian Western Arctic

T. G. McGee, Ph.D., Wellington (New Zealand), 1969, Professor and Director, Institute for Asian Research—Third World cities, East and Southeast Asia

Margaret E. A. North, M.A., Kansas, 1961, Senior Instructor—plant geography

Robert N. North, Ph.D., U.B.C., 1968, Associate Professor—economic development, U.S.S.R.

T. R. Oke, Ph.D., McMaster, 1967, Professor—climatology (urban and micro)

J. Lewis Robinson, Ph.D., Clark, 1946, Professor—Canada, philosophy of geography

Marwyn Samuels, Ph.D., Washington, 1971, Associate Professor—historical, China, philosophy of geography

Alfred H. Siemens, Ph.D., Wisconsin, 1964, Associate Professor—cultural, Latin America (on leave, 1980)

H. O. Slaymaker, Ph.D., Cambridge, 1968, Associate Professor—fluvial geomorphology/hydrology, British Columbia

Robert H. T. Smith, Ph.D., Australian National, 1962, Associate Vice President and Professor—economic, Third World

J. K. Stager, Ph.D., Edinburgh, 1962, Associate Dean and Professor—Canadian Arctic

D. Steyn, Ph.D., British Columbia, 1980, Assistant Professor (part-time)—boundary layer meteorology

Graeme Wynn, Ph.D., Toronto, 1974, Assistant Professor—historical, Canada

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Forbes, Donald Lawrence. "Deltaic and Estuarine Sedimentation at Babbage River, Yukon Territory: Time Sequence Analysis," 1980.

Gill, Warren George. "Material Artifacts as Indicators of Lifestyle," 1980.

Holdsworth, Deryck William. "The Meaning of Vernacular Housing in Early Vancouver," 1980.

Steyn, Douw Berbrand. "Turbulence, Diffusion and the Daytime Mixed Layer Depth over a Coastal City," 1980.

Master's:

Braun, Ludwig Niklaus. "Scale Dependence of Factors Controlling the Release of Water from Snow and Ice Storage," 1980.

Carr, Adriane Janice. "The Development of Neighbourhood in Kitsilano: Ideas, Actors and the Landscape," 1980.

Chambers, Robert Wood. "The Changing Geography of the Fir Trade in the Upper Missouri Country before 1835," 1980.

Fallick, Arthur Laurence. "Locational Needs and Preferences of the Aged," 1980.

Francoeur, Jean-Gilles. "The Subjective Geometry of Regional Space," 1980.

Hart, Jackson Sanford. "Clastic Sediment Sources and Suspended-Sediment Yield in a Coast Mountain Watershed, British Columbia," 1979.

Hertzman, Owen. "Cloud Mapping from the Earth's Surface Using an Infrared Radiance Contrast Technique," 1979.

252

Kalanda, Brian Douglas. "Suburban Evapotranspiration Estimates in Vancouver from Energy Balance Measurements," 1979.

Pratt, Geraldine Joyce. "Domestic Interiors and the Use of the Expert," 1980.

Scarnell, Aida Rosalind. "Changes in the Spatial and Structural Organization of Trade in Southern Veracruz, Mexico," 1980.

Teti, Patrick Anthony. "The Variability of Stream Chemistry in a Coast Mountain Watershed, British Columbia," 1979.

University of Calgary

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1961 GRADUATE PROGRAM FOUNDED: 1961

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/79-6/30/80: 3 Masters, 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 21 Masters 5 Ph.D.
NOT IN RESIDENCE: 2 Masters 2 Ph.D.

HEAD: Mario B. Giovinetto

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Program, Department of Geography, The University of Calgary, Calgary, Alberta, Canada T2N 1N4
Telephone (403) 284-5584

PROGRAMS AND RESEARCH FACILITIES: Programs of graduate study are offered in most fields of Geography at the Masters and the Doctoral level and all involve course work and a dissertation. The majority of present graduate students are at the Masters level and are working in the fields of: geomorphology, biogeography, climatology, resource utilization, urban and economic studies, social and historical geography. A similar emphasis occurs at the Doctoral level where programs are available in many areas of human and physical geography including the geography of resources. Faculty and graduate studies focus primarily upon Western Canada and the Americas.

The department has well-equipped laboratories for cartography, soils, biogeography, geomorphology, and climatology (includes the University Weather Research Station) and has materials and equipment for field work, air photo interpretation and quantitative analysis (including: Tektronix graphics and Diablo hard copy terminals linked to the University's Computer Centre which houses Honeywell Multics and IBM 360-50 computers; a large digitizer linked to an IBM keypunch; and an Apple II computer with 48K of memory and floppy disk).

Geography is an active participant in the work of the Kananaskis Centre for Environmental Research (situated in the Kananaskis Valley), the Institute for Transportation Research and programs on Resources and the Environment, Urban Studies, and Latin American Studies. The University Library has good geography holdings with large collections of current periodicals, government documents, and maps.

Departmental publication lists are available upon request from N. Barton, Collections Room—Geography.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:
Academic Plan: Year system; two four-month sessions (September—April), and an inter-session normally dedicated to thesis work (May—August).

Admission Requirements: Baccalaureate degree with an average of at least B in the work of the last two undergraduate years and recommendation of the department. Early application is advised as offers of departmental financial aid are usually made by January for September entry.

Financial Aid: Graduate research, teaching, and service assistantships range from $7500 to $9000 (plus remission of fees and travel allowance) depending upon the particular assistantships and year of study at Calgary.

University and Provincial awards range to $8000 (details in the Faculty of Graduate Studies Calendar). In addition graduate students may be eligible for awards offered by The Canada Council, National Research Council, Central Mortgage and Housing Corporation, Transportation Commission, and other agencies.

STAFF:

Brenton M. Barr, Ph.D., Toronto, 1968, Professor—industrial location, regional economic development, Soviet Union, Western Canada

Lawrence D. Cordes, Ph.D., British Columbia, 1973, Associate Professor—biogeography, soils, wildland ecosystems

Michael R. C. Coulson, Ph.D., Kansas, 1966, Associate Professor—cartography, urban

Wayne K. D. Davies, Ph.D., Wales, 1964, Professor and Associate Dean, Faculty of Graduate Studies—urban, methodology, political

Mario B. Giovinetto, Ph.D., Wisconsin, 1968, Professor and Department Head—physical climatology, climatic change, glaciology

Alfonso Gonzalez, Ph.D., Texas, 1962, Professor—Latin America, socioeconomic development, population, world regions

Louis Hamill, Ph.D., Washington, 1963, Associate Professor—renewable resources, wildland environments, recreation and tourism, landscape analysis

Stuart A. Harris, Ph.D., London, 1968, Professor—geomorphology, soils, Quaternary studies

Peter D. Herrem, M.A., Minnesota, 1971, Instructor—cultural and historical geography

David R. W. Jones, Ph.D., London, 1964, Associate Professor—international trade, political, cultural and economic geography of the Tropics

Herbert G. Kariel, Ph.D., Iowa, 1962, Professor—social, diffusion, perception, mountain regions and national parks

Arthur G. Limbird, Ph.D., Michigan State, 1971, Associate Professor—soils, environmental analysis

Richard P. Momsen, Jr., Ph.D., Minnesota, 1960, Professor—Brazil, Latin America, applications of remote sensing to regional analysis

Lawrence C. Nkemdirim, Ph.D., London, 1967, Professor—climatology, hydrology

Lynn A. Rosenvall, Ph.D., UC, Berkeley, 1972, Associate Professor—historical and cultural, Southwest Pacific
Derald G. Smith, Ph.D., Johns Hopkins, 1973, Associate Professor—fluvial geomorphology
Nigel M. Waters, Ph.D., Western Ontario, 1977, Associate Professor—transportation, economic, analytical methods

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:
Ph.D.:
Cadden, Patrick Guthrie. "The Public Sector as Urban Employer: The Local Importance and Locational Distribution of Public Employment in Alberta," 1979.
Master's:
Andrey, Jean Clara. "Spatial Distribution of Precipitation in Calgary," 1979.
Hughes, Francine Marie Ragody. "A Classification Scheme for Waterfowl Breeding Habitat in The Peace-Athabasca Delta," 1980.
Matthews, Allan Stuart. "A Comparison of the Forces of Agglomeration Within Calgary's Industrial Parks," 1979.

Carleton University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1957 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A. (Ph.D. possible in cooperating departments)

GRANTED 7/1/79–6/30/80: 12 M.A.

GRADUATE STUDENTS IN RESIDENCE: 23
NOT IN RESIDENCE: 27

CHAIRMAN: D.B. Knight

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Supervisor of Graduate Studies, Department of Geography, Carleton University, Colonel By Drive, Ottawa, Ontario, Canada K1S 5B6
Telephone (613) 231-2641

PROGRAMS AND RESEARCH FACILITIES: The M.A. program of the Department offers instruction and research guidance in the fields of Cultural and Historical Geography, Urban and Economic Geography, Rural and Resource Development, Cartography, Physical Geography, and Geotechnical Science. Within these areas a high level of flexibility is available in the formulation of the student's program, so long as it falls within the research interests of the department. Since effective pursuit of many geographical research problems requires a cooperative role from faculty, the student's research advisory committee may be drawn from several specialist groups from both within and outside the department.

Since the strength and scope of a graduate program is in large measure determined by the expertise and interests of the faculty members, the principal research interests of the various faculty members is elaborated below in some detail. In addition to these interests the Department has close liaison with other academic departments and with the Institute of Canadian Studies, the School of International Affairs, the Institute of Soviet and East European Studies of the University, and with researchers in several Federal Government Departments. Study and research are supported by highly qualified staff in the fields of data processing, computer mapping, cartography, and instrument design and fabrication. Detailed descriptions are available of laboratory facilities for physical geography and geotechnical studies, cartography and computer mapping, and other services and facilities. While the main cartographic interest within the department is in computer mapping, a Cooperative Program in Cartography with Queen's University, Kingston, Ontario allows for broader exposure to this subfield. Carleton University's location in Ottawa also provides access to more than 50 specialized libraries, many of which are in Federal Government Departments. The National Library, National Archives, and Statistics Canada are among the important data sources.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The minimum requirement for the M.A. is five credits of which the thesis has a value of two. Registration may begin in the fall, winter, or summer term. The minimum *admission requirement* is normally a B.A. or B.Sc. Honours degree or its equivalent with upper second (B) standing. Other applicants may be accepted into a Qualifying Year program.

Financial Assistance: Carleton University offers graduate scholarships and assistantships in amounts comparable to those available from other Ontario universities. Other fellowships and scholarships are available from the Ontario Government, Canada Council, National Research Council, Central Mortgage and Housing Corporation, and other organizations.

FACULTY INTERESTS:

Duncan M. Anderson, M.Sc., Western Ontario—outdoor recreational land use; land classification, regionalism in Canada

David Bennett, Ph.D., Liverpool—geography of social well-being; spatial variations in quality and equality in life in Canada; geography of income in Canada; geography and philosophy; factorial ecology, urban growth, intra-urban change

John Clarke, Ph.D., Western Ontario—historical geography of Eastern Canada: archives and statistical aspects; rural settlement in developing areas (primarily Canada); population change, ethnic origins, land tenure systems and land speculation in Ontario; urban historical geography

Barbara E. Farrell, M.A., Carleton—cartography, cartographic and geographic education

Michael F. Fox, M.A., Carleton—intra-urban location, instructional development and remote sensing applications

J. Peter Johnson, Jr., Ph.D., McGill—Pleistocene and recent history of northern Labrador

David B. Knight, Ph.D., Chicago—cultural-historical and political geography of developing areas, notably Canada, Southern Africa, and the Southwest Pacific;

geographies of the mind and mental maps; political and religious authority and nationalist ideology and their impact on landscape, territorial organization, and notions of territoriality; history of geographic thought

Gordon C. Merrill, Ph.D., UC, Berkeley—cultural geography of Canada and the Caribbean, and the geographical aspects of development in Third World countries

Stewart B. Raby, Ph.D., Wales, Adjunct Professor, Research Director, Canadian Indian Rights Commission—cross-cultural studies of indigenous people's land claims, with special focus on Canada; cultural and political geography; history of geographic thought

R. O. Ramseier, D.Sc., Laval, Adjunct Professor, Atmospheric Environment Service—growth, classification, material properties and engineering applications of floating ice; remote sensing of ice, snow and oceans

D. Michael Ray, Ph.D., Chicago—system growth and spatial dynamics; urban and regional development in Canada; quantitative methods

M. W. Smith, Ph.D., British Columbia—microclimatology; soil thermal and moisture regimes (especially freezing soils); permafrost; climate variability; computer simulation

D.R.F. Taylor, Ph.D., Edinburgh—spatial analysis, regional and rural development in the Third World countries, especially Africa; applied aspects of geographic information systems and computer assisted cartography

Gordon D. Taylor, M.A., British Columbia, Adjunct Professor, Assistant Director, Research and Analysis, Office of Tourism, Federal Government—geography of recreation and tourism in Canada and internationally

G. Clarke Topp, Ph.D., Wisconsin, Adjunct Professor, Research Scientist, Land Resource Research Institute Agriculture Canada—soil physical properties and processes relating to water flow and storage; methods for field measurement of soil-water properties

J. Kenneth Torrance, Ph.D., Cornell—chemical, mineralogical, and physical influences on geotechnical behavior of soil, especially post-glacial marine clays; modification of soil behavior; soil freezing and frost heave; vegetation establishment on mine waste; soils and land use

John E. Tunbridge, Ph.D., Bristol—evolution of contemporary urban distributions from pre-industrial antecedents; urban historical and cultural heritage and conservation issues

A. Iain Wallace, D.Phil., Oxford—industrial geography; freight transportation; regional economic development; the economic geography of Canada; economic geography in the context of epistemology and political economy

Thomas P. Wilkinson, Ph.D., Newcastle—sediment, solute and bed load dynamics in streams; Quaternary palaeogeography and hydrology; landform morphometry - applications to bathymetric mapping; geography curriculum development at the secondary/post-secondary interface

Peter J. Williams, Fil.Dr., Stockholm—properties and behavior of earth materials, especially physical and thermal properties of freezing soils; geotechnical application of such studies: highways, pipelines, etc.

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Aryeetey-Attoh, Samuel Stephen. "Spatial Variations of Social Well-Being in Ontario," 1980.* Mf., National Library, Ottawa.

Brennan, Shawn Patrick. "Shaping Urban Futures: An Examination of Land Banking, Urban Growth and Urban Form," 1980.* Mf., National Library, Ottawa.

Calderwood, Bonnie Jean. "An Inquiry into the Formation of Ribbed Moraine and its Role in Interpretation of the Glacial History of the Avalon Peninsula, Newfoundland," 1979.* Mf., National Library, Ottawa.

Cobbah, Josiah Alfred Mills. "Development and Regional Inequalities in Ghana, 1960-1970," 1979.* Mf., National Library, Ottawa.

Miller, John Davidson. "An Equilibrium Surface Temperature Climate Model Applied to First Year Sea Ice Growth," 1979.* Mf., National Library, Ottawa.

Patterson, Daniel Edward. "The Measurement of Unfrozen Water Content in Freezing Soils by Time Domain Reflectometry," 1980.* Mf., National Library, Ottawa.

Perchanok, Max Samuel. "History of a Glacier-Dammed Lake on Donjek River, Yukon," 1980.* Mf., National Library, Ottawa.

Perfect, Edmund. "Temperature-Induced Water Migration in Saturated Frozen Soils," 1980.* Mf., National Library, Ottawa.

Sabula, Mabula Maseni. "Transportation Impacts on Agricultural and Rural Development: The Case of Muranga District, Central Province, Kenya, East Africa," 1980.* Mf., National Library, Ottawa.

Weatherall, Wayne Richie. "A Soil-Agroclimatic Index for Classifying Agricultural Land: A Case Study for Southern Ontario," 1979.* Mf., National Library, Ottawa.

Weldon, Jessie Turner. "The Salient Factors Contributing to the Earliest Settlement Patterns in East and West Hawkesbury Townships Upper Canada 1788-1846," 1980.* Mf., National Library, Ottawa.

White, Pamela Margaret. "A Heartland/Hinterland Analysis of Images of Northern Canada as Frontier Wilderness and Homeland," 1979.* Mf., National Library, Ottawa.

University of Guelph

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A., M.Sc.

GRANTED 7/1/79-6/30/80: 4

GRADUATE STUDENTS IN RESIDENCE: 16
NOT IN RESIDENCE: 5

CHAIRMAN: G. T. Bloomfield

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Committee, Department of Geography, University of Guelph, Guelph, Ontario, Canada N1G 2W1
Telephone (519) 824-4120, ext. 2171

PROGRAMS AND RESEARCH FACILITIES: The M.A. program emphasizes rural geography. It covers a wide range of faculty interests including historical studies, mathematical model building, decision making on the farm, rural land-use analysis, small settlements and rural planning, and rural (non-agricultural) resource analysis. The University Library is especially strong in nineteenth and twentieth century agricultural sources and the Department has an extensive agri-data bank. There is close cooperation with the personnel and resources of the Ontario Agricultural College.

The M.Sc. program emphasizes a physical, quantitative approach including both field and laboratory experimentation and measurement. Areas of faculty interest include slope stability and strength of landforming materials; aeolian sediment transport; periglacial processes; Quaternary landforms; coastal processes; and vegetation-geomorphic interrelationships. The department has fully equipped geomorphology labs. There is close cooperation and interaction with geology and soil science faculty in the Department of Land Resource Science and with Agricultural Engineering (Hydrology).

Students interested in resource analysis may register in the joint Geography/Centre for Resource Development programs (both M.A. and M.Sc.). Research opportunities are also available through the Rural Development Outreach Program.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Trimester system. Admission requirements: a B average in honours Geography or equivalent. Financial aid in the form of Teaching Assistantships ($3500 per year) with additional support from research funding and scholarships. M.A. and M.Sc. programs require course work and thesis. The Geography/C.R.D. program may be taken by course work and research paper only.

STAFF:

Gerald T. Bloomfield, Ph.D., Nottingham, 1964, Professor—urban-industrial, transport, rural settlement, New Zealand

Fredric A. Dahms, Ph.D., Auckland, 1966, Professor—geography and planning, historical geography of settlements

Robin G. Davidson-Arnott, Ph.D., Toronto, 1975, Associate Professor—geomorphology, coastal studies

Barry D. Fahey, Ph.D., Colorado, 1971, Associate Professor—periglacial geomorphology, permafrost

Anthony M. Fuller, Ph.D., Hull, 1972, Associate Professor—agricultural, rural development, Italy (also Director, Rural Development Outreach Program)

G. Patrick Gough, M.A., Wisconsin, 1960, Assistant Professor—manufacturing, transportation

Alun E. Joseph, Ph.D., McMaster, 1976, Assistant Professor—delivery of services, quantitative techniques

Philip D. Keddie, Ph.D., Waterloo, 1976, Associate Professor—agricultural, rural settlement, Canada

Kenneth Kelly, Ph.D., Toronto, 1968, Associate Professor—cultural, historical geography of Ontario, Latin America

Reid D. Kreutzwiser, Ph.D., Western Ontario, 1978, Assistant Professor—resource management, recreation

Julius A. Mage, Ph.D., Waterloo, 1974, Associate Professor—agricultural, rural Canada

Michael R. Moss, Ph.D., Sheffield, 1973, Associate Professor—biogeography, biotic resources, environmental pollution

William G. Nickling, Ph.D., Ottawa, 1976, Assistant Professor—geomorphology, aeolian sediment transport, slopes

Barry E. Smit, Ph.D., McMaster, 1977, Associate Professor—agricultural, quantitative methods

Kok-Chiang Tan, Ph.D., London, 1966, Associate Professor—political, economic development, Southeast Asia, China, the Third World

Jacqueline S. Wolfe, Ph.D., McMaster, 1976, Associate Professor—political, rural planning

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Brklacich, Michael. "Potential for a Satisfying Recreational Outing: Cross Country at Rockwood and Elora Gorge," 1980.* Mf., National Library, Ottawa.

Conway, Margaret. "The Representativeness of Vocal Participants in Public Planning Meetings, Hay Township, Huron County Ontario," 1979.* Mf., National Library, Ottawa.

Pember, Glenn. "Morphology and Sedimentology of Multiple Parallel Bars, Southern Georgian Bay, Ontario," 1979.* Mf., National Library, Ottawa.

Steusser, Lee. "A Re-examination of Geopolitik, 1924–1944," 1979.* Mf., National Library, Ottawa.

Université Laval

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1948 GRADUATE PROGRAM FOUNDED: 1948

DEGREES OFFERED: maîtrise ès arts (M.A.), doctorat ès lettres (Ph.D.)

GRANTED 1/1/79–6/30/80: 11 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 50 M.A. 7 Ph.D.
NOT IN RESIDENCE: 48 M.A., 15 Ph.D.

CHAIRMAN: André Hufty

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Directeur, Etudes de 2e et 3e cycles, Département de Géographie, Université Laval, Québec, Québec, Canada G1K 7P4
Telephone (418) 656–2512

PROGRAMS AND RESEARCH FACILITIES: *Programs:* (1) Physical Geography and Geomorphology, (2) Cultural Geography, (3) Social and Economic Geography, emphasis on North America, (4) Cartography, (5) Toponymy, and (6) Geographical Bases of Planning (Aménagement). The latter program is integrated in a university-wide multi-disciplinary program. *Research Facilities:* Well-equipped physical geography and cartographic laboratories; numerous desk calculators; digital plotter; APL terminal connected to computer center; digitizer and micro-processor; computer center consisting of IBM 360 (model 50) and IBM 370 (model 155) located adjacent to department; excellent library facilities including one of the most complete map libraries in Canada. As the university is situated in the provincial capital and historical and cultural center of French Canada, numerous government facilities and archives are available. The department also enjoys close relations with the Center for Northern Studies and Center for Regional Planning and Development.

The department also publishes a quarterly geographical review, *Cahiers de géographie de Québec.*

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan:* Two 15 week trimesters, September to May. *Admission:* An honours degree (Canada) or equivalent degree is necessary for admittance to the M.A. program. The doctoral program requires a candidate to have a Master's degree or its equivalent. A speaking knowledge of the French language is necessary though theses may also be written in English. *Financial Aid:* A number of teaching and research assistantships are offered.

STAFF:

Michael Allard, Ph.D., McGill, Associate Professor—geomorphology

Marcel Bélanger, D.d'U., Grenoble, Professor—cultural, geographic thought, Québec

Jacques Bernier, Ph.D., Edinburgh, Associate Professor—political, Africa

Luc Bureau, Ph.D., Minnesota, Associate Professor and Editor, Cahiers de géographie de Québec—rural perception, planning

Paul Bussières, D.E.S., Laval, Associate Professor—economic, transportation, geography of energy

Peter Brooke Clibbon, D. ès L., Laval, Professor and Director, Interdisciplinary Program in Regional Planning (Graduate Level)—land use, rural and recreational planning (aménagement)

Rodolphe De Koninck, Ph.D., Singapore, Professor—cultural, problems of developing countries, Southeast Asia

Paul-Yves Denis, D. ès Ph. y L. (geografía), Cuyo, Argentina, Professor—Latin America, urban (on leave 1980-81)

Louise Filion, Ph.D. candidate, Laval, Instructor—biogeography

Louis-Edmond Hamelin, D.d'U., Grenoble, Professor—general geography, Canada, the North (on leave)

André Hufty, D. ès S., Liège, Professor—climatology

Francois Hulbert, Docteur de 3e cycle, Rennes, Assistant Professor—regional and urban planning (aménagement), economic

Michel Jurdant, Ph.D., Cornell, Associate Professor—ecology, biogeography

Jacques Letarte, Diplôme de l'Ecole Pratique des Hautes Etudes, Paris, Professor—cartography, photo interpretation

Dean Louder, Ph.D., Washington, Associate Professor—social, cultural

Christian Morissonneau, Ph.D. candidate, McGill, Assistant Professor—historical

Jean Raveneau, Docteur de 3e cycle, Strasbourg, Professor—thematic and computer mapping, population

Gilles Ritchot, D.d'U., Strasbourg, Professor—geomorphological cartography, structural geomorphology, urban forms

Joël Rouffignat, Docteur de 3e cycle, Bordeaux, Assistant Professor—transportation and communications, agricultural geography, Third World

Maurice Saint-Yves, M.A., Laval, Professor—geographic education, regional geography, Canada

Marius Thériault, Ph.D. candidate, Laval, Instructor—climatology, quantitative methods

Germain Tremblay, D. ès S., Paris, Associate Professor—geomorphology

Louis Trotier, L. es L., Laval, Professor—urban

Paul-Yvon Villeneuve, Ph.D., Washington, Assistant Professor—urban social, theoretical geography, quantitative methods

Eric Waddell, Ph.D., Australian National, Associate Professor—cultural, Oceania

Two additional positions to be filled.

TITLES OF THESES AND DISSERTATIONS COMPLETED 1/1/79-6/30/80:

Ph.D.:

Marois, Claude. "Etude méthodologique et critique de deux modèles de projections de population à micro échelle," 1980.

Master's:

Bélanger, Carl. "Géomorphologie de la région de Rivière du Loup," 1979.

Boudreau, Jean-Pierre. "Espace-Machine et Aménagement a Moncton," 1979.

Crépault, Denis. "L'autonomie régionale en Republique populaire de Chine: Contribution de la géographie politique à l'etude des minorités nationales," 1979.

Fauchon, André. "Géomorphologie des environs du Lac Ste-Marie, Gatineau, Québec," 1979.

Lacombe, Jacques. "Géomorphologie glaciaire de la partie centrale du comté de Bellechasse," 1979.

Nadeau, Jules. "Sélectivité des migrations au Québec," 1979.

Neel-de Maistre, Sylvie. "L'influence du cadastre dans le paysage rural de deux municipalités à cadastres contrastés: St-Louis de Lotbinière et Ogden (Stanstead)," 1979.

Normandin, Pierre. "La suburbanisation du Québec Metropolitain," 1979.

Paré, Robert. "La géographie dans l'education des adultes au Québec," 1979.

Plamondon-Bouchard, Monique. "Etude des tempêtes de neige survenues dans la ville de Québec (1965-1975) de de leur incidence sur la circulation routière," 1979.

Viau, Bernard. "Les assemblages morphologiques de l'Echine rocheuse littorale de Rivière Ouelle," 1979.

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The University of Manitoba

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1951 GRADUATE PROGRAM FOUNDED: 1953

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 5 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 30 M.A. 5 Ph.D.
NOT IN RESIDENCE: 8 M.A. 0 Ph.D.

HEAD: A.J.W. Catchpole

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Chairman, Graduate Affairs Committee, Department of Geography, The University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2
Telephone (204) 474-9256

PROGRAMS AND RESEARCH FACILITIES: Graduate research opportunities are available in many aspects of human geography, notably in such fields as agricultural, cultural, historical, population, rural settlement, urban and industrial geographies, and in land utilization and resource management, regional development, tourism and recreation, and environmental cognition. In physical geography, research training exists mainly in climatology, geomorphology, hydrology, and associated studies of natural hazards. Most graduate research focusses on western Canada, but recent theses have included India and Africa. Studies of Winnipeg and other Manitoban settlements, especially in the North, continue to be numerous. Ample scope exists for research on recreation and other resources of Manitoba, the cultural and historical geographies of the Prairies, and the spectrum of economic activities in this region. Energy balance and hydroclimatological investigations, erosion and mass wasting studies of slopes, and fluvial geomorphology dominate research endeavours in Manitoban physical geography.

The University's IBM 370–168 computer has extensive geographic representation devices, and is available to graduate students. The Department has Olivetti-Underwood Programma 652 and 101 computers and electronic calculators. It possesses a geomorphological research laboratory, cartographic facilities, and a map library. The Dafoe, Science and Engineering libraries house approximately 900,000 volumes and possess a large range of materials pertinent to geographical research. Interdisciplinary units on campus include the Agassiz Centre for Water Studies, the Centre for Transportation Studies, and the Natural Resource Institute. Off campus, a unique facility for those wishing to pursue research in historical geography is Winnipeg's recently acquired archives of the Hudson Bay Company.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: M.A. program: 1 year of courses (in Geography and related fields) plus thesis. Admission with 'B' standing in Hons. or advanced Geography degree. Admission with 'B' in B.A. (Gen.) degree, Geography major, requires a pre-M.A. year of courses.

Ph.D. program: 2 years of courses plus thesis; admission with M.A./M.Sc. Geography. Graduate student support programs in the form of University Fellowships and graduate teaching and service assistantships are available up to $6000.

STAFF:

J. S. Brierley, Ph.D., Edinburgh, 1972, Associate Professor—agricultural, Caribbean, Western Canada

W. J. Brown, Ph.D., London, 1965, Associate Professor—geomorphology, natural hazards

A. J. W. Catchpole, Ph.D., Durham, 1966, Professor and Head—climatology, climatic change

R. H. Foster, Ph.D., UC, Berkeley, 1975, Assistant Professor—urban planning, transportation, Canada and U.S.A.

B. Kaye, Ph.D., London, 1977, Assistant Professor—historical, Western Canada, cultural, Europe

Z. Mieczkowksi, Ph.D., Moscow, 1954, Associate Professor—tourism and recreation, U.S.S.R.

J. D. Milton, Ph.D., Western Australia, 1978, Assistant Professor—climatology

D. W. Moodie, Ph.D., Alberta, 1972, Associate Professor—historical, cultural, Western Canada

W. Norton, Ph.D., McMaster, 1973, Assistant Professor—historical settlement geography, spatial analysis

J. R. Rogge, Ph.D., London, 1968, Associate Professor—population, Africa, Middle East

J. I. Romanowski, Ph.D., Washington, 1970, Assistant Professor—land resource management

H. L. Sawatzky, Ph.D., UC, Berkeley, 1967, Associate Professor—land utilization and planning, recreation, Latin America

V. Smil, Ph.D., Pennsylvania State, 1972, Associate Professor—energy and the environment, China

G. C. Smith, Ph.D., McMaster, 1974, Assistant Professor—environmental cognition, quantitative methods

L. P. Stene, Ph.D., Western Ontario, 1976, Assistant Professor—geomorphology

R. C. Tiwari, Ph.D., Reading, 1964, Associate Professor—urban, India, Africa

D. Todd, Ph.D., London, 1975, Associate Professor—regional development planning, economic

PROFESSOR EMERITUS:

T. R. Weir, Ph.D., Wisconsin, 1951, Professor—Anglo America, remote sensing, cartography

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

McGinn, Roderick Alan. "Alluvial Fan Geomorphic Systems: The Riding Mountain Escarpment Model," 1979.*

Master's:

Blais, Eric-Lorne. "An Investigation into the Movement of Alluvial Shale Gravels in the Riding Mountain Area of Manitoba," 1980.*

Crews, Robert James. "On the Use of the Garin-Lowry Activity Allocation Model in Metropolitan Area Planning: The Case of Winnipeg," 1979.*

Hatzipanayis, Kyriacos. "Spatial Consequences of a Regional Development Program: Some Insights from the Interlake of Manitoba," 1980.*

Lapp, Ronald Carter. "The Migration of New Immigrants into a Single Resource Community in Northern Manitoba," 1980.*

Mazur, Douglas Henry. "A Method of Land Analysis and Classification for the Canadian Shield Portion of Manitoba," 1979.*

McGill University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1945 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.A., M.Sc., Ph.D., Diploma in Environmental Remote Sensing

GRANTED 7/1/79-6/30/80: 6 Master's, 6 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 25 Masters 13 Ph.D.
NOT IN RESIDENCE: 4 Masters 5 Ph.D.

CHAIRMAN: J. Brian Bird

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Affairs, Department of Geography, McGill University, 805 Sherbrooke Street West,
Montreal, Quebec, Canada H3A 2K6
Telephone (514) 392-5700

PROGRAMS AND RESEARCH FACILITIES: The Department offers integrated programs of study within the following fields. The major locations of research are northern Canada, Quebec, and the Caribbean. The research and supervision interests of the department fall into the following clusters: (A) Urban Geography: emphasizing studies of the social milieu of the multi-cultural city; of the service location-allocation problem; of spatial interaction; and of the climatic environment. (B) Geography of Development: emphasizing studies around the themes of "development," "underdevelopment," and "unequal development" in their historical context and with contemporary application; centre-periphery relationships; and the cultural, ecological, economic, and political responses to such relationships. (C) Terrain Analysis: emphasizing studies of fluvial and landslide processes, and stream and slope development; of glacial and periglacial processes and landforms; of Quaternary landscape evolution; and of coastal processes. (D) Environmental Studies: emphasizing biogeography, including waste-land revegetation and plant distributions; hydrology, including water quality and snowmelt; soils, including pedogenesis and nutrient cycling; permafrost; climatology, including bio- and urban climatology; and savanna ecology. (E) Remote Sensing: emphasizing studies of the use of remote sensing techniques in the analysis of the physical landscape and patterns of human activity. (F) Recreation and Tourism: emphasizing studies of the spatial and environmental features of recreation and tourism systems at the international, regional, and local levels, with particular attention to impact on land use, carrying capacity, local societies, cultures, economies, and ecology, the development of management strategies, and recreation demand and travel behavior. (G) Cultural Ecology: emphasizing studies of cultural adaptation to urban and non-urban environments; of land use and resource utilization from the perspectives of energy flow and economic, social, and ideological behavior; the ecology of tropical agriculture; land claim problems; and northern hunting systems.

The Department has close association with the Centre for Developing-Area Studies and the Urban Planning Program, and the Centre for Northern Studies and Research.

The Geography Department is located in a new building, has excellent cartographic and remote sensing facilities, and maintains biogeography, hydrology, pedology, and geomorphology research laboratories with a full range of equipment. The Tropical Research Room and University Map Library are located within the same building, as is the University Computer Centre. The Department has ready access to the materials and facilities of the Centre for Northern Studies and Research and the Centre for Developing Area Studies. Many members of staff participate fully in the work of these Centres. The University maintains field stations at Mount St. Hilaire (close to McGill), Schefferville (northern Quebec), and Bellairs (Barbados). These stations can provide accommodation, facilities, and support for research in any field.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Graduate studies are administered by the Faculty of Graduate Studies and Research and a Departmental Graduate Affairs Committee; admission requirement is that of Honours degree (Canada) or equivalent specialization (U.S.)—a qualifying year is possible; Master's degree requires two resident sessions, while Ph.D. requires two years in addition to Master's degree; M.Ed. is conducted in conjunction with the Faculty of Education; all degrees (except M.Ed.) require thesis; normally 12 or more departmental assistantships (full or half-time) and research assistantships are awarded: in 1980–81, Master's $5000 and Ph.D. $5500 for 8 months, 12 hours work per week; competitive summer stipends of up to $1000; assistance is also available for fieldwork through research project funds. The Diploma Program requires one year including research paper.

STAFF:

Warwick Armstrong, Ph.D., Victoria, New Zealand, 1970, Associate Professor—resource and development, Third World (Latin America)

J. Brian Bird, M.A., Cambridge, 1949, Professor and Chairman—geomorphology, Arctic and Caribbean

J. H. Bradbury, Ph.D., Simon Fraser, 1977, Assistant Professor—economic, Canada

Michael A. Carson, Ph.D., Cambridge, 1967, Associate Professor—engineering geomorphology, with special reference to landslides and fluvial processes

R. Norman Drummond, Ph.D., McGill, 1965, Associate Professor—cartography, Quebec

N. Enright, Ph.D., Australian National, 1979, Assistant Professor—biogeography

Gordon Ewing, Ph.D., McMaster, 1971, Associate Professor—urban, behavioral

Ruth Fincher, Ph.D., Clark, 1979, Assistant Professor—urban

Benjamin Garnier, M.A., Cambridge, 1943, Professor—climatology, Caribbean and Southeast Canada

Hardy Granberg, M.Sc., McGill, 1972, Assistant Professor—hydrology

Theo L. Hills, Ph.D., McGill, 1967, Professor—cultural ecology, Caribbean

John E. Lewis, Ph.D., Illinois, 1972, Associate Professor—bioclimatology, physiological climatology, urban climatic environments

Jan Lundgren, Ph.D., Stockholm, 1964, Associate Professor—economic development, Caribbean and Quebec

Thomas Meredith, Ph.D., Cambridge, 1979, Assistant Professor—biogeography

T. R. Moore, Ph.D., Aberdeen, 1971, Associate Professor—soils

L. Muller-Wille, D. Phil., Westfalische Wilhelms-Universitat, 1971, Assistant Professor—polar

Sherry Olson, Ph.D., Johns Hopkins, 1965, Associate Professor—social, urban

John T. Parry, Ph.D., McGill, 1965, Professor—air photo interpretation, Canada

Claire Prudhomme, B.A., McGill, 1976, Faculty Lecturer

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79–6/30/80:

Ph.D.:

Girault, Christian. "Habitants, Speculateurs et Exportateurs: Le commerce du Café en Haiti," 1980.

Kulka, Terrence B. "A Spatial Restructuring of Business Organizations: A Feasibility Study of Remote Work Arrangements," 1980.

Nurse, Lawson A. "Spatial Organization in a Hinterland Economy," 1979.

Ommer, Rosemary R. "From Outpost to Outport: The Jersey Merchant Triangle in the 19th Century," 1979.

Petzold, Donald E. "Synoptic Investigations of the Summer Climate and Lake Evaporation in Quebec-Labrador," 1980.

Wenzel, George W. "Social Organization as an Adaptive Referent in Inuit Cultural Ecology: The Case of Clyde River and Aquiqtiuk," 1980.

Master's:

Butt, Gordon. "Plant Response to Certain Base-Rich Soils in Eastern Canada," 1979.

Hrebenyk, Bohdan W. "Wintertime Precipitation Patterns in the Montreal Region," 1980.

Kohlholf, Karen J. "Utilization of Family Medical Centers: A Diffusion Study," 1979.

Malzahn, Manfred R. "Merchants and the Evolution of the North Cariboo, British Columbia, 1908–1933," 1979.

Ross, Susan. "Obstacles to the Reclamation of Newly Reformed Land in Joe's River Valley, Barbados," 1979.

Ruddick, Susan M. "The Movement of Public Housing in Montreal 1930–1958," 1979.

McMaster University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1948 GRADUATE PROGRAM FOUNDED: 1954

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/79-6/30/80: 5 Masters, 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 21 Masters 17 Ph.D.
NOT IN RESIDENCE: 6 Masters 3 Ph.D.

CHAIRMAN: Michael J. Webber

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Chairman, Department of Geography, McMaster University, 1280 Main Street West, Hamilton, Ontario, Canada L8S 4K1
Telephone (416) 525-9140, ext. 4534

PROGRAMS AND RESEARCH FACILITIES: Research is conducted by the members of the staff in their areas of specialization.

The research facilities include a large map library, cartographic and calculating equipment, laboratories for work in geomorphology, microclimatology (including a field laboratory), pedology, and remote sensing, and direct access to the University Computing Centre (IBM 7040 and C.D.C. 6400).

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admission Requirements:* A standing of Class I (A) or upper Class II (B plus) in previous academic work. *Financial Aid:* 1. National Research Council Fellowships. 2. C.M.H.C. Scholarships for urban-related research. 3. Canada Council Doctoral Fellowships. 4. University Scholarships. 5. Assistantships: Candidates for the Ph.D.: from $7000, candidates for M.A. or M.Sc.: from $5000. Assistantships entail 10 hours per week of teaching or research during the September-April academic year. *Academic Plan:* Year, from mid-September to early April, divided into two terms.

STAFF:
Arden C. Brummell, Ph.D., McMaster, 1977, Assistant Professor—behavioral
Brian T. Bunting, Ph.D., London, 1971, Professor—pedology
Andrew F. Burghardt, Ph.D., Wisconsin, 1958, Professor—political
John A. Davies, Ph.D., London, 1966, Professor and Associate Chairman—radiation balance climatology
Michael J. Dear, Ph.D., Pennsylvania, 1974, Associate Professor—urban planning
J. John Drake, Ph.D., McMaster, 1974, Associate Professor—hydrology, hydrochemistry
Derek C. Ford, D. Phil., Oxford, 1963, Professor—karst and mountain geomorphology, Quaternary chronology
R. Louis Gentilcore, Ph.D., Maryland, 1950, Professor—historical

Frederick L. Hall, Ph.D., Chicago, 1972, Associate Professor—transportation, urban planning (joint appointment with Civil Engineering)

Philip J. Howarth, Ph.D., Glasgow, 1968, Associate Professor—remote sensing, glacial geomorphology

Leslie J. King, Ph.D., Iowa, 1960, Professor—urban growth models

Kao-Lee Liaw, Ph.D., Clark, 1973, Associate Professor—migration theory, linear models

S. Brian McCann, Ph.D., Cambridge, 1961, Professor—coastal geomorphology, fluvial

George Papageorgiou, Ph.D., Ohio State, 1970, Professor—urban, spatial models

Lloyd G. Reeds, Ph.D., Toronto, 1956, Professor—agricultural

Wayne R. Rouse, Ph.D., McGill, 1965, Professor—heat and water balance climatology

S. Martin Taylor, Ph.D., British Columbia, 1974, Associate Professor—behavioral

Michael J. Webber, Ph.D., Australian National, 1967, Professor and Chairman—location theory, entropy maximizing models

Ming-ko Woo, Ph.D., British Columbia, 1971, Associate Professor—hydrology

Harold A. Wood, Ph.D., Toronto, 1958, Professor—Latin America

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Forster, John James Hamilton. "Modelling Short-Run Urban Labour Market Behaviour: Twenty-Nine Cities in the North-Eastern U.S.A., 1964-1973," 1979.

Tucker, Christopher M. "Late Quaternary Events on the Burin Peninsula, Newfoundland with reference to the Island of St. Pierre et Miquelon (France)," 1979.

Master's:

Blackburn, William. "Determination of Longwave Irradiance at the Ground," 1980.

Breston, Barbara. "Effect of Traffic Noise on Property Value," 1979.

Caussy, Devianee. "Residential Mobility of Italian Immigrants in Hamilton," 1980.

Dobson, Monika. "Factors Influencing Evaporation From An Arctic Tundra," 1980.

Isaak, Steven. "The Concept of Fit and Public Response to Community Mental Health Facilities," 1979.

Jordan, Linda. "Heat and Moisture Exchange in a Permafrost Active Layer, Churchill, Manitoba," 1980.

Leckie, Dale. "Late Quaternary History of the Hermitage Bay area, Newfoundland," 1979.

Roberge, Jean. "Geomorphologie du Karst de la Haute-Saumonds, Ile D'Anticosti, Quebec," 1979.

Wickware, Greg. "Wetland Classification and Environmental Monitoring in the Peace-Athabasca Delta Using Landsat Digital Data," 1979.

Memorial University of Newfoundland

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1968

DEGREES OFFERED: M.A., M.Sc.

GRANTED 7/1/79-6/30/80: 0

GRADUATE STUDENTS IN RESIDENCE: 7
NOT IN RESIDENCE: 2

HEAD: Dr. M. Staveley

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. Michael Staveley, Department of Geography, Memorial University of Newfoundland, Elizabeth Avenue, St. John's, Newfoundland, Canada A1B 3X9
Telephone (709) 737-7417/8

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography at Memorial University offers programmes leading to the M.A. and M.Sc. degrees. Students may commence their programme in Fall, Winter, or Spring semesters, the programme of study and research normally requiring two years of full-time work. Candidates are required to take at least six one-semester graduate courses in the programme agreed upon with the Head of the Department and a supervisor appointed from the faculty. Courses in other disciplines may be taken and candidates may be required to take an examination in a foreign language should the research require it. The second year of study will normally be devoted to the writing of a thesis.

The Departmental map library serves as a depository for Canadian Government maps and maintains an extensive collection of maps, atlases, and aerial photographs. Included within the Department are a fully equipped and professionally staffed cartographic production laboratory and photo-mechanical reproduction services. The Department has an automated mapping unit with a remote typewriter terminal linked to the University IBM 370/158 computer system. Other computer hardware housed in the Department includes key punch and digitizer that can be used in conjunction with PDP 12 and Calcomp drum plotter located on campus. Departmental research laboratories also include facilities for palynology, soil analysis, and flume and rainfall simulator studies with a supporting technical workshop. Equipment for field research includes a departmental vehicle.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Memorial University operates on a semester system. Admission requires a Bachelor's degree with Honours or its equivalent. Applicants without this qualification may be admitted with the requirement that additional undergraduate courses be taken at the discretion of the Department and with the approval of the Committee on Graduate Studies. A certificate of proficiency in English is required if the applicant's native language is other than English or if he has not received his undergraduate instruction in English.

Limited fellowships—bursaries and grants are available from the Province, the University or the University's Institute of Social and Economic Research. The Department also provides teaching and research assistantships of varying amounts according to ability and need.

STAFF:

William H. Allderdice, Ph.D., Columbia, 1972, Assistant Professor—economic, rural, Latin America

Colin E. Banfield, Ph.D., Wales, 1970, Associate Professor—climatology, air pollution

Karyn G. Cooper, M.Sc., McGill, 1978, Lecturer—biogeography

Dianne L. Draper, Ph.D., Waterloo, 1977, Assistant Professor—resource management

Simon M. Evans, Ph.D., Calgary, 1976, Co-ordinator at Corner Brook—cultural, Western Canada

Geoffrey H. Farmer, M.A., Alberta, 1967, Associate Professor—Caribbean

Gordon Handcock, Ph.D., Birmingham, 1979, Associate Professor—rural settlement

Alan G. Macpherson, Ph.D., McGill, 1969, Associate Professor—historical, Northern North Atlantic

Joyce Brown Macpherson, Ph.D., McGill, 1966, Associate Professor—geomorphology, air photo interpretation, palynology

John J. Mannion, Ph.D., Toronto, 1971, Associate Professor—rural settlement, cultural

Roberts J. Mednis, Ph.D., Boston, 1971, Assistant Professor—biogeography, conservation, subarctic

W. Stan. Nowak, Ph.D., London, 1966, Associate Professor—fisheries, economic oceanography, Europe

Robert J. Rogerson, Ph.D., Macquarie, 1979, Associate Professor—glacial geomorphology, hydrology, Arctic

Chesley W. Sanger, M.A., Memorial, 1973, Associate Professor—historical, urban

Maurice J. Scarlett, Ph.D., Pittsburgh, 1970, Professor—economic, transportation

Christopher Sharpe, Ph.D., Toronto, 1976, Assistant Professor—urban, housing, statistical analysis

Michael Staveley, Ph.D., Alberta, 1973, Associate Professor and Head of Department—historical, population, Soviet Union

Keith J. Storey, Ph.D., Western Ontario, 1977, Associate Professor—economic, regional development

William F. Summers, Ph.D., McGill, 1957, Professor—conservation, Newfoundland

Roger W. White, Ph.D., North Carolina, 1972, Associate Professor—economic, theory, methodology

Clifford H. Wood, M.S., Idaho, 1972, Assistant Professor—thematic and historical cartogaphy

William H. Yoxall, Ph.D., Dublin, 1975, Associate Professor—fluvial and experimental geomorphology

University of Ottawa

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1951 GRADUATE PROGRAM FOUNDED: 1954

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 5 M.A., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 19 M.A. 13 Ph.D.
NOT IN RESIDENCE: 8 M.A. 3 Ph.D.

CHAIRPERSON: Michel Phipps

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Committee, Department of Geography, University of Ottawa, Ottawa, Ontario, Canada
K1N 6N5
Telephone (613) 231-2411 or 2395/2396

PROGRAMS AND RESEARCH FACILITIES: The Geography program emphasizes 1) economic, urban, rural and social geography; 2) geomorphology, biogeography and resource management; 3) computer cartography and remote sensing; and 4) quantitative methods. There is a strong interest in applied and policy oriented work. Principal regional applications are in Canada, South America and South Asia.

In the M.A. program, two semesters of seminars and supervised readings are followed by an examination of the thesis proposal and thesis. The Ph.D. Geography program is composed of two major research papers prepared under supervision (one of which may be replaced by coursework), a comprehensive examination, dissertation proposal, and dissertation.

Students have access to one of the best-equipped university computer centers in Canada, including facilities for computer cartography, as well as a large map and air photo library. Ottawa furthermore offers numerous specialized federal government libraries and the facilities of embassies and consulates. The campus is located near these facilities in the city center.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Located in North America's only major bilingual University (English and French), the Department offers courses and supervision in both English and French. The bicultural character of the Department provides the benefit of exposure to both the English-North American and French schools of thought. Unilingual candidates are admitted to the program in Geography, but are expected to acquire a basic knowledge of the second official language of Canada. *Admission Requirements:* Minimum of B (second class) standing in previous academic work. Exceptions are considered. *Financial Aid:* Up to $7000 for Ph.D. students; up to $5000 for M.A. students. Funds are derived from teaching assignments, research assistantships, staff contracts and grants, and Graduate School Scholarships. Applicants seeking departmental funding are required to make applications to external scholarships, e.g., SSHRC, NRC, CMHC, OGF, etc. *Application Deadline:* To be considered for funding, applications must be received by March 15.

STAFF:

*_Vincent Berdoulay, Ph.D., UC, Berkeley, 1974, Assistant Professor_—social, behavioral, history of geographic thought

*_David Douglas, M.A., Carleton, 1969, Assistant Professor_—computer mapping

*_Hugh French, Ph.D., Southampton, 1967, Professor_—permafrost geomorphology, Arctic Canada

*_Hugues Gagnon, D. d'Universite, Paris I, 1976, Associate Professor_—remote sensing, soil stability, land use planning, Eastern Ontario, Western Quebec

*_Marie-Anne Geurts, D. es Sc., Louvain, 1975, Assistant Professor_—geomorphology, palynology

*_Peter Harrison, Ph.D., Washington, 1973, Associate Professor_—resource management, coastal management, regional planning and analysis, public economy

*_Peter Johnson, Ph.D., Leeds, 1969, Associate Professor_—geomorphology, Yukon Territory

Edmond Kayser, D. 3e cycle, Strasbourg, 1974, Assistant Professor—transportation and communications, Western Europe

Daniel Lagarec, M.A., Laval, 1971, Lecturer—geomorphology

André Langlois, D.E.A., Toulouse, 1978, Lecturer—cultural, social, behavioral

*_Michel Phipps, D. es Sc., Toulouse, 1969, Associate Professor and Chairman_—ecology, analysis and planning of biotic resources

*_Roger Roberge, Ph.D., Clark, 1972, Associate Professor_—industrial location, geography of invention and innovation

*_Denis St-Onge, D. es Sc., Louvain, 1962, Professor_—applied geomorphology, earth science and planning

Harishankar Srivastava, Ph.D., Florida, 1961, Professor—political, South Asia

*_Guy Steed, Ph.D., Washington, 1966, Professor_—economic, manufacturing, regional development

Barry Wellar, Ph.D., Northwestern, 1969, Associate Professor—urban and regional development, public policy analysis, transportation

*_Rolf Wesche, Ph.D., Florida, 1967, Associate Professor_—rural, economic development, South America

*Members of School of Graduate Studies

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Dubois, Jean-Marie. "Environnements quaternaire et évolution postglaciaire d'une zone côtière en émersion en bordure du bouclier canadien: la moyenne Côte Nord du St-Laurent, Québec," 1980.

Schroeder, Jacques. "Les grottes du Canyon de Nahanne," 1979.* Mf., Univ., Microfilms.

Master's:

Battistoni, Massimo. "The Distributive Trades in the Regional Municipality of Sudbury (Ontario): An Analysis of Market and Employment Dependence," 1979.* Mf.

Bourgeois, Léopold. "Analyse du rôle et de l'utilisation de l'informatique écologique en ménagement forestier," 1980.* Mf.

Kapuria, Suchetta. "Impact of Urban Growth on the Provision of Municipal Services: A Case Study of the Township of Gloucester," 1979. Mf.

Maxwell, Michael. "The role of Catastrophic Processes in the Evolution of Talus Derived Rock Glaciers," 1979. Mf.

Paradis, Serge. "Géomorphologie de la région de Churchill (Manitoba)," 1980.* Mf.

Queen's University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/79–6/30/80: 12 Masters

GRADUATE STUDENTS IN RESIDENCE: 24 Masters 9 Ph.D.
NOT IN RESIDENCE: 11 Masters 5 Ph.D.

HEAD: Brian S. Osborne

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. John Holmes, Chairman, Graduate Committee, Department of Geography, Queen's University, Kingston, Ontario, Canada K7L 3N6
Telephone (613) 547-2796

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers programs of study leading to the M.A., M.Sc., and Ph.D. degrees. The areas of interest in which graduate work is undertaken are:

1. Urban and economic geography focusing on intra-urban geography, political economy of cities and regions, regional development and public policy, diffusion and spatial interaction.
2. Geomorphic and pedologic processes with emphasis on contemporary land forming processes, watershed analysis, pedology and soil microscopy.
3. Historical geography with particular emphasis on the exploration, settlement, and urban historical geography of Canada and North America.
4. Cartography concentrating on perception and map design, the planning of national mapping programs, and historical cartography.
5. Climatology with emphasis on micro-climatology.

The Ph.D. degree is offered in the fields of Urban-Economic Geography and Geomorphic and Pedological Processes.

The libraries at Queen's University offer very good collections in the social and physical sciences. The resources available for research on Canada are exceptional. Other research facilities include the university's IBM 360-50 computer, the departmental digital minicomputing system PDP-11/VO3, a Calcomp plotter and other graphic devices. Departmental cartography laboratories house a Saltzman projector, a type-setting machine and a photogrammetry and photo interpretation laboratory.

The Geomorphology and Climatology laboratories are well instrumented: soils equipment includes a magnetic separator, atomic absorption spectrophotometer, a differential thermal analyser, together with the equipment for a conventional wet chemical laboratory. Field reconnaissance and research facilities include a field vehicle, mobile field laboratory, and instrumentation equipment such as a deep-drill, a neutron probe, stream gauges, and many other items.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The Master's student entering the program with an Honours Bachelor's degree or equivalent is required to be in residence for a minimum period of one academic session of two semesters. For holders of the General Bachelor's degree or equivalent, two academic sessions in residence are required. The Master's program consists of either: (a) four semester courses and a thesis weighted as one half of the total program, or (b) six semester courses plus a thesis weighted as one quarter of the total program.

Admission to the Ph.D. program requires a Master's degree or its equivalent. Doctoral students are required to complete six semester courses, to take a comprehensive examination, and to complete a dissertation.

Teaching assistantships in undergraduate geography courses are awarded for the eight-month academic year (two semesters) on a competitive basis. Geography graduate students are eligible to compete for university fellowships. In 1980–81, the level of support for incoming full-time graduate students, from all sources, will not be less than $5,400.

FULL-TIME AND PART-TIME STAFF:

J. B. Cannon, Ph.D., Washington, 1969, Assistant Professor—economic, regional development

H. W. Castner, Ph.D., Wisconsin, 1964, Associate Professor—cartography, map design, thematic mapping, historical cartography of Russia

R. Gilbert, Ph.D., British Columbia, 1974, Assistant Professor—geomorphology, physical limnology and oceanography

P. G. Goheen, Ph.D., Chicago, 1970, Associate Professor—urban, historical

J. Holmes, Ph.D., Ohio State, 1974, Assistant Professor—political economy of cities and regions

W. G. Lovell, Ph.D., Alberta, 1980, Assistant Professor—historical, cultural, Latin America

J. H. McCaughey, Ph.D., McMaster, 1972, Associate Professor—microclimatology

G. McGrath, M.A., Cambridge, 1960, Associate Professor—cartography, air photogrammetry and interpretation, surveying, Africa

E. G. Moore, Ph.D., Queensland, 1966, Professor—urban, behavioral, residential location and public policy

E. D. Ongley, Ph.D., Sydney, 1971, Associate Professor—geomorphology, drainage network and slope studies, water resources and environmental management

B. S. Osborne, Ph.D., Southampton, 1967, Professor—human, historical, cultural

J. B. Riddell, Ph.D., Pennsylvania State, 1969, Associate Professor—Africa, development, spatial interaction

R. I. Ruggles, Ph.D., London, 1958, Professor—historical, historical cartography, U.S.S.R.

G. K. Rutherford, Ph.D., Vollebekk, Norway, 1959, Professor—soils, agricultural, land systems analysis, tropical areas

A. N. Spector, Ph.D., Ohio State, 1978, Assistant Professor—behavioral, quantitative, urban

A. M. Taylor, D.Phil., Oxford, 1955, Professor Emeritus—political, technology and environment, historical

R. R. Tinline, Ph.D., Bristol, 1973, Associate Professor—medical, information systems, diffusion

W. J. Vreeken, Ph.D., Iowa State, 1972, Assistant Professor—soils, water resources

M. H. Yeates, Ph.D., Northwestern, 1963, Professor and Dean of the School of Graduate Studies—urban, economic, regional analysis

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Carew, L. M. "John C. Clark: A Man, His Life, His Space: A Case Study in Historical Geography, 1832-1862," 1979. Mf., National Library, Ottawa.

Chauvin, J. B. "Measuring Consumer Accessibility to In-Patient Services in Ontario," 1980. Mf., National Library, Ottawa.

Chamney, L. G. "Historical and Contemporary Sedimentation in Peter's Lake, Southeastern Ontario," 1980. Mf., National Library, Ottawa.

D'Andrea, J. "The James Street Bridge Conflict: A Theoretical Approach," 1980. Mf., National Library, Ottawa.

Ede, K. B. "The Making of a Colonial Space-Economy: The Roots of 'Core' and 'Periphery' in Uganda," 1979. Mf., National Library, Ottawa.

Ferguson, G. R. "The Peter Robinson Settlers in Emily Township 1825 to 1861," 1979. Mf., National Library, Ottawa.

Hall, C. J. "The Image of the Small Ontario Town in Fiction 1900–1918: A Case Study in Humanistic Geography," 1980. Mf., National Library, Ottawa.

Moir, R. M. "A Diagraph Analysis of the Structure of the Nova Scotia Economy," 1980. Mf., National Library, Ottawa.

Leask, S. M. "Marl Deposition in Knowlton Lake, Ontario," 1980. Mf., National Library, Ottawa.

Lister, P. H. W. "Beyond the Informal Sector: A Critical Study of the Informal Sector Concept in Third World Urban Employment Planning," 1980. Mf., National Library, Ottawa.

Rice, J. I. "From Crown to City: The Urban Land Development Process, Kingston, Ontario, 1800–1900," 1980. Mf., National Library, Ottawa.

Shields, J. G. "The Murray Map Cartographically Considered: A Study of General James Murray Survey of the St. Lawrence River Valley in 1761," 1980. Mf., National Library, Ottawa.

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University of Regina

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1966 GRADUATE PROGRAM FOUNDED: 1972

DEGREES OFFERED: M.A., M.Sc.

GRANTED 7/1/79-6/30/80: 1

GRADUATE STUDENTS IN RESIDENCE: 5
NOT IN RESIDENCE: 3

HEAD: Alexander H. Paul

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. A. H. Paul,
Head, Department of Geography, University of Regina, Regina, Saskatchewan,
Canada S4S 0A2
Telephone (306) 584-4223

PROGRAMS AND RESEARCH FACILITIES: The M.A. and M.Sc. programmes include lectures, seminars, intensive field work and dissertation. The originality of the dissertation is a prerequisite for the degree. Though the programmes are individualized, students are encouraged to do interdisciplinary work. The systematic fields emphasized are urban, rural, and quality and use of resources. Adequate facilities for cartography, air photo interpretation, computer analysis, and graphics are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: For details write to the Head.

STAFF:

Cesar N. Caviedes, Ph.D., Freiburg, Associate Professor—water resources, glacial geomorphology, climatology, Latin America

Edmund H. Dale, Ph.D., Alberta, Professor—political, political-urban, Commonwealth Caribbean

Alexander H. Paul, Ph.D., Alberta, Associate Professor and Head—climatology, recreation, water resources, Western Canada

Abul H. Sahir, Ph.D., Minnesota, Associate Professor—cultural, geographic thought, rural

Hans G. Schlichtmann, Ph.D., Tubingen, Associate Professor—thematic cartography, cultural, Western Europe

Adrian A. Seaborne, Ph.D., Swansea, Assistant Professor—economic, Canada

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Ross, Donald George. "Population Growth: The Catalyst of Spatial Changes in Regina, 1945 to 1975, with a Projection to the Future," 1979.

University of Saskatchewan

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1963

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/79–6/30/80: 14 M.A., 5 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 6 Masters 2 Ph.D.
NOT IN RESIDENCE: 8 Masters 3 Ph.D.

ACTING HEAD: John G. McConnell

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. J. E. Fitz-Gibbon, Geography Department, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0
Telephone (306) 343-2252

PROGRAMS AND RESEARCH FACILITIES: Training up to and including the Ph.D. level is provided both within the Department of Geography and, as necessary, in association with other Departments. Graduate College admission requires the equivalent of the University of Saskatchewan degree of B.A. or B.Sc. (Honors) with minimum of a second class, or B, standing. Students with less than these prerequisities may be admitted on a probationary basis with departmental permission.

Saskatchewan and the surrounding region provide unusual opportunities for research in physical geography. Further, within the province and the prairies the short history of settlement, the relatively complete archival record and speed of socio-economic change give good opportunity for a variety of research in rural and urban land use and historical geography. Research is encouraged in certain regional specializations as well as in grassland, subarctic, and arctic work. Facilities for advanced work in cartography include a well-equipped photo-mechanical laboratory. Excellent computer facilities are available (IBM System/370 158).

Financial Aid: Financial support is available during the academic year and summer period in the form of Teaching Fellowships, Graduate Scholarships, Teaching Assistantships, and Institute for Northern Studies Scholarships. Part-time employment is often available in various areas of applied geography such as land use inventory and planning.

STAFF:

S. S. Ahmad, M.A., Clark, 1965, Lecturer—economic, underdeveloped lands

O. W. Archibold, Ph.D., Simon Fraser, 1975, Assistant Professor—biogeography (sabbatical)

W. Barr, M.Sc., McGill, 1965, Professor—Pleistocene geomorphology

J. L. Bergsteinsson, B.A., B.Ed., 1967, Saskatchewan, Research Associate—applied climatology (Saskatchewan Research Council, Physics Division)

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R. M. Bone, Ph.D., Nebraska, 1962, Professor and Director, Institute for Northern Studies—Soviet Union, polar lands

A. K. Chakravarti, Ph.D., Wisconsin, 1967, Professor—climatology, agricultural, South Asia

J. E. FitzGibbon, Ph.D., McGill, 1977, Assistant Professor—physical, geomorphology, hydrology

K. K. Fung, M.Sc., Alberta, 1965, Associate Professor—cartography, air-photo interpretation, China and Japan

J. G. McConnell, M.A., Toronto, 1965, Associate Professor—historical, cultural, North America, Arctic

A. G. Phipps, Ph.D., Iowa, 1978, Assistant Professor—urban, economic, regional planning

R. Rees, M.A., Toronto, 1960, Associate Professor—urban, Europe (sabbatical)

J. H. Richards, Ph.D., Toronto, 1954, Professor—land use and regional development, recreation

R. O. St. Arnaud, Ph.D., Michigan State, 1961, Special Lecturer (Professor, Soil Science)—soils

M. R. Wilson, Ph.D., Oregon, 1973, Associate Professor—biogeography, tropical, population, Latin America

One additional position to be filled—resources and conservation, cultural

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Fox, Maureen. "Jewish Agricultural Colonies in Saskatchewan with Special Reference to the Colonies of Sonnenfeld and Edenbridge."

Franson, Hilding O. "The Environmental Basis for Growth Strategy Proposed for the Regina Region."

Haynes, Anthony William. "Nature and Growth of Villages and Small Towns Adjacent to Saskatoon, 1971–76, As Influenced by Growth Patterns in the City."

Wheaton, Elaine Esther. "The Evaluation of the Climatic Environment of a Large Area with few Reporting Stations: A Case Study of Northern Saskatchewan."

University of Sherbrooke

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1963 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.Sc.

GRANTED 6/30/79–1/1/80: 1

GRADUATE STUDENTS IN RESIDENCE: 13
NOT IN RESIDENCE: 29

DIRECTOR: Jean-Marie Dubois

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Département de géographie, Faculté des Arts, Université de Sherbrooke, 1500 Boul. Université, Sherbrooke, Québec, Canada J1K 2R1
Telephone (819) 565-4521

PROGRAMS AND RESEARCH FACILITIES: Specialization in Spatial Organization in Regional Planning, Small Towns and Societies in Rural Environment, Remote Sensing and Cartography, and Quaternary Studies. The Department has a physical geography laboratory and a remote sensing field laboratory. An official research program is held with the Lennoxville Experimental Farm of Agriculture Canada.

The cartography laboratory is well-equipped including and EAI Pacer 100 Computer with tracing table and a Bendix digitizer system. In addition the University possesses an IBM 360-65. The Department works in close association with the University Regional Planning Research Centre.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Admission Requirements:* An Honor Degree (Canada) or equivalent degree (U.S.A.). A speaking knowledge of the French language. *Academic Plan:* Year divided into semesters from September to May. *Financial Aid:* 10 assistantships of $2000 available each year.

STAFF:

Jean-Jacques Boisvert, D.d'U., Grenoble, 1954, Associate Professor—climatology
Ferdinand Bonn, Ph.D. (geography), Strasbourg, 1975, Associate Professor—geopedology, biogeography, remote sensing
Jean Castonguay, M.A. (geography), Sherbrooke, 1974, Assistant Professor—automated cartography, informatic
Roch Choquette, licence d'enseignement secondaire, M.A. (geography), Sherbrooke, 1970, Assistant Professor—teaching of geography
Jean-Marie Dubois, Ph.D. (geography), Ottawa, 1980, Director of the Department of Geography, Associate Professor—air photography, Quaternary geomorphology
Robert Gagnon, Ph.D. (geography), Aix, 1971, Professor—economic, agricultural, quantitative
Hugh Gwyn, Ph.D. (geology), Western Ontario, 1971, Associate Professor—Quaternary geology and geomorphology
Denis Morin, M.A. (geography), Laval, 1974, Assistant Professor—social, urban
Roger Nadeau, Ph.D. (geography), Aix, 1975, Assistant Professor—tourism, recreation, regional
Romain Paquette, Ph.D., McGill, 1968, Professor—behavioral, geography of underdeveloped countries, geography of the Caribbean area
André Poulin, M.A. (geography), Montreal, 1969, Associate Professor—geomorphology, land use, man's impact on environment
Marcel Pouliot, M.A. (geography), Laval, 1970, Assistant Professor—transportation, communication, public policies
Michel Rheault, M.A. (geography), Ottawa, 1973, Assistant Professor—cartography

Jean-Marie Roy, D. d'U., Grenoble, 1951, Professor—history of geographical thought, political, regional

Oleg Stanek, Ph.D. (architecture), Brno, Czechoslovakia, 1952, M.A. (economics), Prague, 1949, Professor—planning, economics, geography of socialist countries

TITLES OF THESES COMPLETED 6/30/79-1/1/80:

Master's:

Chiasson, Marcel. "Analyse des problèmes de développement des ressources naturelles de la péninsule acadienne et programme de mise en valeur," 1979.

Simon Fraser University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/79-6/30/80: 1 M.A., 1 M.Sc., 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 19 M.A. 8 Ph.D.
NOT IN RESIDENCE: 0 M.A. 2 Ph.D.

CHAIRMAN: E. J. Hickin

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Secretary, Graduate Studies Committee, Department of Geography, Simon Fraser University, Burnaby, British Columbia, Canada V5A 1S6
Telephone (604) 291-3322

PROGRAMS AND RESEARCH FACILITIES: Students may specialize in the three basic branches of geography: cultural, economic, and physical, though considerable intersub-disciplinary work is also pursued. The department takes a special interest in developing theoretical and conceptual frameworks in the systematic fields of geography. Current research, in addition to work in the immediate area, is being undertaken in the United Kingdom, the U.S., and in the Canadian North.

Facilities for advanced work include well-equipped cartography, geomorphology, biogeography, and climatology laboratories. In addition the University possesses an IBM 370/155 computer, with Calcomp and Tectronics plotters.

Thesis work is currently being undertaken in the following areas: Plant Geography, Urban Social Geography, Resource Analysis, Meandering Rivers, Computer Cartography, etc.

M.A. Program consists of either 30 trimester credits of course work, or 20 credits and a thesis (10 credits). Students must give evidence of their research ability by the satisfactory completion *either* of a thesis (counting for 10 credits) *or* of two extended essays based on assignments carried out as part of the work in graduate courses.

M.Sc. Program. Students must give evidence of their research ability by the satisfactory completion of a thesis and 20 hours of course work.

Ph.D. Program consists of a basically unstructured program, successful passing of a set of qualifying examinations and the completion of a dissertation.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Trimester System.* Entrance to degree program possible on January 1st, May 1st or September 1st each year. Last dates for application to the Trimester selected are: September 30, January 31, and March 15 respectively.

M.A. Program. To gain admission student applicants must present evidence that they are adequately prepared in terms of the extent of their undergraduate training and the level of their scholarly ability. Normally, admission is granted to students who have achieved at least a "good" second class standing in their undergraduate work ("B", "B+", "A"). Students from United Kingdom universities, generally, will be accepted only if they have achieved a "first" or "upper second". In exceptional cases students may be admitted who are able to present alternative evidence of their academic ability.

M.Sc. Program. Students should normally hold a B.Sc. degree, or equivalent, in an honors program with at least a good second class standing (3.0 G.P.A.) in Geography or a related discipline; where the candidate's first degree is not in Geography, he/she should have at least 12 semester hours or the equivalent in upper division Geography courses.

Students with a general degree must have 30 semester hours or the equivalent in upper division Geography courses.

Ph.D. Program. Admission is only granted when the department has evidence that a candidate is able both to complete formal course work at the most advanced level and to produce a satisfactory dissertation.

Other requirements. In both cases the student is expected to show or acquire competence in statistical techniques, problems and principles of geographic methodology, and, in addition, a student may be directed to acquire an adequate knowledge of a language other than English which would be relevant to his/her studies.

Financial aid. The department can normally offer a total of four one-semester, part-time teaching assistantships to M.A. and M.Sc. candidates and eight assistantships to doctoral candidates, at the current salary of $2407.60 and $2932.80 per semester respectively (that is, $4815.20 per two semesters for M.A.'s and M.Sc.'s and $5865.60 per two semesters for Ph.D. candidates). Continuation of assistantships beyond one semester depends upon satisfactory teaching performance. In addition, once during a program of study, a stipend at an M.A./M.Sc. rate of $2400 and at at Ph.D. rate of $2900 is usually available after three semesters of graduate work. Other forms of support may be available from time to time on specific departmental research projects.

STAFF:

M. L. Barker, Ph.D., Toronto, 1972, Associate Professor—resource studies, behavioral geography, Western Canada

R. C. Brown, Ph.D., Michigan State, 1967, Associate Professor and Dean of Arts—agricultural, resource development

C. B. Crampton, Ph.D., Bristol, 1956, Professor—pedology and terrain analysis

F. F. Cunningham, Dip. Ed., Durham, F.R.G.S., Professor—geomorphology, Latin America, relations between landscape science and landscape art

J. C. Day, Ph.D., Chicago, 1970, Professor and Director of MRM Program—resource and environmental management, water management

M. E. Eliot Hurst, Ph.D., Durham, 1966, Professor—economic behavior, socialist geography, imperialism

L. J. Evenden, Ph.D., Edinburgh, 1970, Associate Professor—urban and social geography

E. M. Gibson, Ph.D., British Columbia, 1970, Associate Professor—urban cultural geography, methodology

R. Hayter, Ph.D., Washington, 1973, Assistant Professor—economic, manufacturing, locational analysis

E. J. Hickin, Ph.D., Sydney, 1971, Associate Professor—geomorphology

R. B. Horsfall, Ph.D., Johns Hopkins, 1969, Assistant Professor—cultural, environmental psychology, medical geography

I. Hutchinson, Ph.D., Simon Fraser, 1977, Assistant Professor—biogeography

P. M. Koroscil, Ph.D., Michigan, 1970, Associate Professor—cultural, historical, Canada

A. MacPherson, M.A., Edinburgh, 1950, Professor—urban climatology, Western Europe, cultural

T. K. Peucker, D.Phil., Heidelberg, 1966, Associate Professor (Geography/Computing Science)—economic, quantitative, computer cartography

J. T. Pierce, Ph.D., London School of Economics, 1976, Assistant Professor—urban economic, rural resource management

G. A. Rheumer, Ph.D., Illinois, 1953, Associate Professor—historical, British Columbia

M. C. Roberts, Ph.D., Iowa, 1966, Professor—fluvial geomorphology, field methods, urban hydrology

R. B. Sagar, M.Sc., McGill, 1959, Associate Professor—climatology, glaciology

P. L. Wagner, Ph.D., UC, Berkeley, 1953, Professor—cultural

J. W. Wilson, M.Sc., 1947, M.R.P., 1951, North Carolina, Professor—urban and regional planning

S. T. Wong, Ph.D., Chicago, 1968, Associate Professor—resources management, population studies, quantitative methods

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Galois, Robert Michael. "Social Structure in Space: The Making of Vancouver, 1886-1901," 1980. *Mf., National Library of Canada.

Liu, Juanita N.W. "The Economic Impact of Tourism on an Island Economy: A Case Study of Victoria, B.C.," 1980. *Mf., National Library of Canada.

Master's:

Gale, Robert John. "The Channel Geometry of Two Discontinuous Gullies," 1979. *Mf., National Library of Canada.

McPhee, Michael William. "Water Quality Management in British Columbia: Pollution Control in the Pulp and Paper Industry," 1979. *Mf., National Library of Canada.

University of Toronto

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1935

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/79–6/30/80: 15 Masters, 3 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 23 Masters 30 Ph.D.
NOT IN RESIDENCE: 6 Masters 3 Ph.D.

CHAIRMAN: John N.H. Britton

FOR CATALOG AND FURTHER INFORMATION WRITE TO: The Chairman, Department of Geography, University of Toronto, Toronto, Ontario, Canada M5S 1A1
Telephone (416) 978-3377

PROGRAMS AND RESEARCH FACILITIES: The M.A. and M.Sc. programs normally take a year, and comprise either a thesis and at least one graduate course, or a research paper and at least three graduate courses (or six half courses). A collaborative Master's program in environmental studies provides the opportunity to take core courses and undertake an internship outside the Geography Department. The Ph.D. is essentially a research degree requiring the preparation of a doctoral thesis which meets the standard of a publishable research monograph. This program requires at least two years in residence after the M.A.

The department is prepared to supervise graduate research in climatology, geomorphology, pedology and land management, resource management and environmental hazards, cultural and social geography, historical geography, philosophy and history of geography, industrial geography, regional development, transportation analysis, quantitative analysis, and urban geography. The department conducts and provides for research on Canada, the United States and other areas where members of staff have active research interests, particularly Latin America, the U.S.S.R., Western and Central Europe, Africa, and China.

The University library, with some three and a half million volumes, and special libraries near the campus comprise the largest collection of books and documents in Canada. Computing facilities available on campus include an IBM S/360/65, S/370-165, and DEC System 1060. Computer research facility provides specialized services, i.e., graphics, real-time computing, and data acquisition.

Departmental facilities include cartographic laboratories, laboratories and a field station for climatology and geomorphology, computer programming assistance and research rooms for graduate students.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan*—Year system, with entrance in September. *Admission Requirements*—Minimum requirement is a bachelor's degree from a recognized university within the last five years with at least upper second class standing or its equivalent. Exceptions permitted in unusual circumstances. *Financial Aid*—Teaching and Research Assistantships carrying stipends of $3650 to $4200 are available and involve not more than ten hours work per week. Fellowships (University of Toronto, Social Sciences and Humanities Council of Canada, Central Mortgage and Housing Corporation, National Research Council, Transportation Development Agency, etc.) $4200 to $8500 requiring no services. Summer employment in department often available.

GRADUATE FACULTY:

Howard F. Andrews, D.Phil., Sussex, 1970, Associate Professor—social geography and methodology

Alan M. Baker, Ph.D., Chicago, 1976, Associate Professor—urban, spatial analysis

Larry S. Bourne, Ph.D., Chicago, 1966, Professor and Director, Centre for Urban and Community Studies—urban, regional analysis

John N. H. Britton, Ph.D., London, 1966, Professor and Chairman—industrial, spatial interaction, regional economic analysis

Rorke Bryan, Ph.D., Sheffield, 1967, Professor—slope processes, soil erosion, wildlife and parks conservation

Michael Bunce, Ph.D., Sheffield, 1970, Associate Professor—agriculture, rural land use

Ian Burton, Ph.D., Chicago, 1962, Professor—environmental hazards, perception and decision-making in resource management

Leslie Curry, Ph.D., New Zealand, 1959, Professor—climatology, analytic and statistical models in geography

William G. Dean, Ph.D., McGill, 1959, Professor—Pleistocene geomorphology, Ontario geography, cartography, the North

Neil C. Field, Ph.D., Washington, 1956, Professor—U.S.S.R., economic geography (industrial and agricultural)

J. H. Galloway, Ph.D., London, 1965, Professor—Latin America, historical

Brian Greenwood, Ph.D., Bristol, 1970, Professor—geomorphology, sedimentology, coastal studies

Angelo P. Grima, Ph.D., Toronto, 1970, Associate Professor—natural resources and environmental management

F. Kenneth Hare, Ph.D., Montreal, 1950, Professor—dynamic and physical climatology, ecology

Alan V. Jopling, Ph.D., Harvard, 1961, Professor—geomorphology, sedimentology, hydrology

Donald Kerr, Ph.D., Toronto, 1950, Professor—industrial, metropolitan growth

James T. Lemon, Ph.D., Wisconsin, 1964, Professor—historical, urban, social

Joseph A. May, Ph.D., Toronto, 1968, Associate Professor—philosophy of geography, history of geography

Thomas F. McIlwraith, Ph.D., Wisconsin, 1973, Associate Professor—historical and cultural geography of North America

Aidan McQuillan, Ph.D., Wisconsin, 1975, Associate Professor—historical geography of North America

John Miron, Ph.D., Toronto, 1974, Assistant Professor—urban, economic, quantitative methods

Edward C. Relph, Ph.D., Toronto, 1973, Assistant Professor—cultural, philosophy of geography, analysis of present day landscapes

Allen J. Scott, Ph.D., Northwestern, 1965, Professor, cross-appointed to Urban and Regional Planning—theoretical geography, planning

James W. Simmons, Ph.D., Chicago, 1964, Professor and Graduate Secretary—urban

Jacob Spelt, Ph.D., Utrecht, 1955, Professor and Vice-Dean, Faculty of Arts and Science—urban, historical

Geza Szeicz, Ph.D., Reading, 1970, Associate Professor—climatology, water balance, crop growth

J. J. van der Eyk, Ph.D., Wageningen, 1957, Professor—pedology, land management, airphoto interpretation, photogrammetry

Rodney R. White, Ph.D., Bristol, Associate Professor—transport geography, regional design, Africa

Joseph B. R. Whitney, Ph.D., Chicago, 1969, Professor—resources, East Asia, political

Anne V. T. Whyte, Ph.D., Johns Hopkins, 1972, Associate Professor—environmental perception and behavior

University of Victoria

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1949 GRADUATE PROGRAM FOUNDED: 1966

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79–6/30/80: 4 M.A., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 22 M.A., 1 Ph.D.
NOT IN RESIDENCE: 8 M.A.

CHAIRMAN: W. R. Derrick Sewell

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Mr. L. T. Ghobrial, Faculty of Graduate Studies, University of Victoria, Victoria, British Columbia, Canada V8W 2Y2
Telephone (604) 477-6911, ext. 404, 407

PROGRAMS AND RESEARCH FACILITIES: The Geography Department concentrates its major efforts in four fields. North America and the Pacific Region are the main regional foci while urban economic, resource management, and geographical techniques are the three other systematic emphases. Research is being undertaken on Canadian topics, East and Southeast Asia, and Polynesia. The urban-economic group is involved in studies of environment and behaviour, regional urban-economic group is involved in studies of environment and behaviour, regional development, transportation, and tourism. Within the resources group current research is concerned with water and coastal resources, hazards, recreation, impact assessment, climatology, and forest management policies.

The facilities of the departmental map library and university library have been developed to support this concentration of research effort. Computing facilities and advanced cartographic equipment are available for research purposes. The Department publishes the Western Geographical Series and has produced 19 book-length titles reflecting both the Department's research interests and those of invited contributors. A discussion paper series, the Cornett Papers, is also produced.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: A baccalaureate degree from a recognized university, or its equivalent, with a "B" average (70%) for the last two years is generally considered the minimum required for admission. Students whose native language is not English are required to provide evidence that their knowledge of English is sufficient to allow them to proceed with their studies. Overseas students should not make provision to travel to Canada until they have actually been admitted by the Faculty of Graduate Studies and have evidence of financial resources to allow them to pursue their studies here. The minimum residence requirement for a Master's degree is the equivalent of one full winter session of study (15 units), but most students should expect to spend two academic years in residence. For the degree of Doctor of Philosophy at least the equivalent of two full winter sessions of study beyond the Master's level or three full winter sessions of study beyond the Bachelor's level, and satisfactory completion of the prescribed program are required. Thesis topics are agreed upon after consultation with a supervisory committee and normally reflect the course work taken by the graduate concerned. The Winter Session is divided into two terms—the first, September to December; the second, January to May.

University of Victoria Fellowships of $4,125, applicable to the session September to April, are awarded by the Faculty of Graduate Studies to students of high academic standing registered full-time in the Faculty. Upon recommendation of the Department, these Fellowships may be accompanied by a Summer Supplement of $1600, applicable to the period May to August, inclusive, for students working full-time on their studies during that period. A very limited number of Fellowships of 8,225 for a twelve-month period are awarded on a competitive basis to truly exceptional students in the University. Part-time Laboratory Instructorships, ranging from $1100 to $3400, applicable to the session September to April, are awarded by the Department. These instructors are assigned two to six contact hours per week, together with preparation and marking, during the period September to April. National Research Council Graduate Scholarships and Bursaries and Central Mortgage and Housing Corporation Fellowships may be awarded subject to conditions laid down by these agencies. Information regarding Canada Council and other Graduate Awards may be obtained from the Faculty of Graduate Studies.

STAFF:

Gerald M. Barber, Ph.D., Toronto, 1974, Assistant Professor—urban, transportation, economic, quantitative

Michael C. R. Edgell, Ph.D., Birmingham, 1967, Associate Professor—physical, biogeography, landscape evaluation, Australia

Charles N. Forward, Ph.D., Clark, 1958, Professor—urban, port functions, urban historical, Canada

Harold D. Foster, Ph.D., London, 1968, Associate Professor—physical, applied geomorphology, hydrology, natural hazards, renewable energy

Leslie T. Foster, Ph.D., Toronto, 1975, Assistant Professor—recreational geography, water resources, policy analysis

Patricia P. Gilmartin, Ph.D., Kansas, 1980, Assistant Professor—cartography, remote sensing

Charles H. Howatson, M.A., British Columbia, 1947, Associate Professor—geology, air photo interpretation, western Canada

David C. Y. Lai, Ph.D., London, 1967, Associate Professor—East Asia, Hong Kong Overseas Chinese, China, industrial, urban

Malcolm A. Micklewright, Ph.D., Washington, 1970, Associate Professor—economic, regional planning and development

Peter E. Murphy, Ph.D., Ohio State, 1970, Associate Professor—urban, community planning, tourist management, quantitative

J. Douglas Porteous, Ph.D., Hull, 1969, Associate Professor—urban, planning, behavioral, humanistic, Latin America

William M. Ross, Ph.D., Washington, 1972, Assistant Professor—resources, political, legal, coastal management, fisheries

W. R. Derrick Sewell, Ph.D., Washington, 1964, Professor and Chairman—resources, behavioral, policy analysis, water, energy

Stanton E. Tuller, Ph.D., UCLA, 1971, Associate Professor—physical, climatology, heat balance, Japan

Rudolph Wikkramatileke, Ph.D., London, 1955, Professor—South and Southeast Asia, economic and cultural

Colin J. B. Wood, Ph.D., McMaster, 1970, Assistant Professor and Graduate Advisor—resources, conflict resolution, economic, quantitative

TITLES OF THESES AND DISSERTATIONS GRANTED 7/1/79–6/30/80:

Ph.D.:

Wuorinen, Vilho. "A Methodology for Mapping Total Risk in Urban Areas," 1979.

Master's:

McClellen, Stephen. "An Economic Evaluation of the British Columbia Natural Gas Royalty System," 1980.

Sandberg, Anders. "A Study in Canadian Political Economy: The Case of the British Columbia Salmon Canning Industry 1870–1914," 1979.

Wigmore, Judy. "The Inquiry Process: The West Coast Oil Ports Inquiry, A Case Study," 1980.

Wikkramatileke, Jacqueline. "The Chinese in West Malaysia: The Continuing Connection to 1979," 1979.

University of Waterloo

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1962 GRADUATE PROGRAM FOUNDED: 1965

DEGREES OFFERED: M.A., Ph.D.

GRANTED 7/1/79-6/30/80: 21 M.A., 0 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 32 M.A. 11 Ph.D.
NOT IN RESIDENCE: 16 M.A. 4 Ph.D.

CHAIRMAN: Christopher R. Bryant

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Ellsworth LeDrew, Graduate Officer, Department of Geography, Faculty of Environmental Studies. University of Waterloo, Waterloo, Ontario, Canada N2L 3G1
Telephone (519) 885-1211, ext. 3404

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography is an integral part of the Faculty of Environmental Studies comprising the Department of Geography, School of Urban and Regional Planning, Department of Man-Environment Studies, and the School of Architecture. Although the graduate programs in Geography and in the School of Urban and Regional Planning are separate and independent, they strongly complement one another. Faculty in Geography and in Planning are readily accessible to all students and there is a constant dialogue between the Geography and Planning graduate students.

The Department offers training and research guidance at the Master's and Doctorate levels. The fields of research specialization are (1) resource analysis (social, economic, and ecological aspects), (2) economic (industrial, rural, regional development), (3) urban, (4) recreation, (5) physical, (6) techniques (air photo interpretation, remote sensing, computer mapping, model-building, statistical analysis). For Honors B.A. (or equivalent) graduates in Geography, there are two routes for the M.A.—(1) the Thesis M.A., and (2) the Course Work M.A. Requirements for the Course Work M.A. are four graduate courses and the completion of a research paper. Requirements for the Thesis M.A. are three graduate courses and a thesis. For the Ph.D. (after the M.A. degree) course requirements vary with the background and needs of the candidate. A dissertation is mandatory, and competence in a language other than English is expected.

Excellent cartographic, photo interpretation, and computer facilities are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: *Academic Plan*—3 Terms (September-December; January-April; May-August) *Admission Requirements*—M.A.: B standing (75%) in Honours B.A. or equivalent. Ph.D.: Must possess M.A. (or equivalent) and first class standing. *Financial Aid*—Department Assistantships with a maximum value of $4540 for two terms.

STAFF:

James H. Bater, Ph.D., London, 1969, Professor—Soviet Union, industrial

Christopher R. Bryant, Ph.D., London, 1970, Associate Professor and Chairman—rural, quantitative methods

Ronald A. Bullock, Ph.D., London, 1969, Associate Professor—cultural, historical, Africa

Trudi Bunting, Ph.D., Toronto, 1975, Assistant Professor and Undergraduate Officer—urban

Aubrey Diem, Ph.D., Michigan, 1961, Professor—regional, Europe

Douglas Dudycha, Ph.D. candidate, London, Lecturer—quantitative methods, computer cartography

Christian Dufournaud, Ph.D., Toronto, 1980, Assistant Professor—resources management, multivariate methods

David K. Erb, Ph.D., McGill, 1963, Professor—tropical geomorphology, air photo interpretation, resource inventory

James S. Gardner, Ph.D., McGill, 1968, Professor—Alpine and arctic geomorphology, environmental hazards and impact studies, geographic education

Leonard Guelke, Ph.D., Toronto, 1974, Associate Professor—geographic thought, cartography, historical, Africa

B. Hyma, Ph.D., Pittsburgh, 1971, Associate Professor—population, developing countries

Robert M. Irving, Ph.D., Minnesota, 1966, Professor—rural, Canada

R. Johnson, Ph.D., Minnesota, 1972, Assistant Professor—recreation

Andrzej Kesik, Ph.D., Marie-Curie Sklodowska, 1959, Associate Professor—air photo interpretation, geomorphology, geomorphological surveying

Ralph R. Krueger, Ph.D., Indiana, 1959, Professor—land use, regional planning and development, Canada

Ellsworth LeDrew, Ph.D., Colorado, 1976, Assistant Professor—climatology, remote sensing

B. Matthews, Ph.D., Cornell, Professor and University President—soils geography

Geoffrey R. McBoyle, Ph.D., Aberdeen, 1969, Associate Professor—climatology, geographic thought and methodology

Alexander G. McLellan, Ph.D., Glasgow, 1967, Associate Professor—glacial geomorphology and field studies

Bruce Mitchell, Ph.D., Liverpool, 1969, Professor—natural resources, quantitative methods

George Mulamoottil, Ph.D., Delhi, Associate Professor, Associate Dean, Graduate Affairs—resource management, environmental planning

Peter H. Nash, Ph.D., Harvard, 1958, Professor—future ekistics

J. G. Nelson, Ph.D., Johns Hopkins, 1959, Professor and Dean, Faculty of Environmental Studies—resources, landscape history

E. Roy Officer, M.A., Wisconsin, 1958, Assistant Professor—historical, political, geographic thought

Richard E. Preston, Ph.D., Clark, 1964, Professor and Associate Chairman—urban, regional development

Lorne H. Russwurm, Ph.D., Illinois, 1964, Professor—urban systems, rural-urban fringe

David F. Walker, Ph.D., Toronto, 1971, Associate Professor—industrial, location theory, regional development

Geoffrey Wall, Ph.D., Hull, 1971, Associate Professor—recreation, tourism, resources

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Black, Laura. "Public Transit and Industry: Hamilton, Ontario, 1871–1979," 1980. *Mf., Univ. Microfilms.

Cotton, Andrew J. "Interpretation in Parks: The Earth Science Component," 1979. *Mf., Univ. Microfilms.

Cullington, Jude. "Public Use of Private Land for Recreation: A Comparative Study," 1980. *Mf., Univ. Microfilms.

Dittmer, Susan L. "Public Environmental Education Programs at Point Pelee, Rondeau, and Long Point," 1979. *Mf., Univ. Microfilms.

Fossung, Esua Y.M. "Plantation Agriculture: A Case Study of the Cameroon Development Corporation in Cameroon," 1980. *Mf., Univ. Microfilms.

Gardner, Julia E. "National Parks and Native People in Northern Canada, Alaska and Northern Australia," 1979. *Mf., Univ. Microfilms.

Gauthier, Dave. "Small Mammals and Vegetation on Selected Burned and Logged Areas in Algonquin Provincial Park, Ontario," 1979. *Mf., Univ. Microfilms.

Jefferies, James J. "Examination of Digital Fourier Transforms as a Means of Extracting Information About the Physical Form of an Urban Area from Remote Sensor Imagery," 1979. *Mf., Univ. Microfilms.

Lai, Chin P.C. "An Application of Transaction Flow Analysis to Commercial and Passenger Interaction," 1980. *Mf., Univ. Microfilms.

Mathieson, Alister R. "The Impacts of Tourism: A State of the Art Study," 1979. *Mf., Univ. Microfilms.

Montgomery, Keith. "Air-Photo Interpretation of Micro-Relief in the Conestoga Lake Area, Ontario," 1980. *Mf., Univ. Microfilms.

Morgan, Bruce. "The Role of Recreation in Regional Economic Expansion: The Economic Impact of the South Georgian Bay Ski Resort Industry," 1980. *Mf., Univ. Microfilms.

Okrainetz, Glen. "Identification of the Areas of Impact of an Industrial Discharge into Long Point Bay, Lake Erie," 1980. *Mf., Univ. Microfilms.

Osborne, Alan. "A Study of a Stagnating Industrial Centre: The Case of Brantford, Ontario," 1980. *Mf., Univ. Microfilms.

Paul, Bimal. "Crop, Livestock and Enterprise Combination Patterns of Southern Ontario: 1951–1971," 1980. *Mf., Univ. Microfilms.

Rahman, Abdur. "A Study of Land Use Stability and Change in Kitchener's Central Commercial Area between 1932 and 1979," 1980. *Mf., Univ. Microfilms.

Smith, Daniel J. "Periglacial Environments and Morphology of the Mt. Rae Area, Southwestern Alberta," 1979. *Mf., Univ. Microfilms.

Steele, Robert. "Regional Policy and Manufacturing Growth in the Scottish New Towns," 1979. *Mf., Univ. Microfilms.

Suffling, Petra. "The Determination of Canada's Land Surface Albedo by Remote Sensing," 1979. *Mf., Univ. Microfilms.

Veale, Barbara J. "Flood Management Policies and Practices of the Grand River Conservation Authority and the Credit Valley Conservation Authority: An Evaluation and Comparison," 1979. *Mf., Univ. Microfilms.

Yasmin, Marziya. "A Comparative Factorial Ecology of Kitchener and London," 1979. *Mf., Univ. Microfilms.

University of Western Ontario

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1938 GRADUATE PROGRAM FOUNDED: 1946

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/79–6/30/80: 6 Masters, 2 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 11 Masters 17 Ph.D.
NOT IN RESIDENCE: 14 Masters 9 Ph.D.

CHAIRMAN: N. L. Nicholson

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Coordinator of Graduate Affairs, Department of Geography, University of Western Ontario, London, Ontario, Canada N6A 5C2
Telephone (519) 679–6853

PROGRAMS AND RESEARCH FACILITIES: The Department is prepared to supervise research within the principal interests of its staff, but particularly in the research foci of urban and regional studies, social geography, recreation and rural studies, physical geography, and quantitative theory and spatial systems. The University offers opportunities for course work and research in Western Hemisphere studies and the Department has close ties with the faculties of Anthropology, Botany, Business Administration, Economics, Engineering, Education, Geology, History, Political Science and Psychology.

The Master's thesis and the Ph.D. dissertation represent the end products toward which the individual's program is directed. Most students and many faculty members participate in the forum on Geographical Methodology. Additional course work, determined on an individual basis, and a field camp make up the course requirements for either the Master's or the Ph.D. degree.

Facilities in a new Social Science Centre include well-equipped laboratories in geomorphology and pedology, a cartographic division with three full-time cartographers and a map library of over 130,000 sheet-maps and 500 atlases, with three full-time curators. The Department's computer facilities include remote PDP–10 terminals, a digitizer, analog plotters and full-time programming consultants. Students also have access to the University's Cyber 73–14 (CDC 6400) system and on-line facilties to IBM 360/65, CDC 660 and Univac 1108. The Department maintains a geomorphology field station on Lake Erie. Study space is provided for each graduate student. Students and faculty publish the semiannual geographical journal *Ontario Geography*. Each year several noted geographers from other universities and agencies are invited to give visiting lectures and seminars in the Department.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: Semester system. Master's applicants must have either an Honors Bachelor's degree or equivalent in Geography with at least a B average from a recognized university, or have a degree in another program with at least a B average and have completed course work to the satisfaction of the Department. Ph.D. applicants who hold a Master's degree or equivalent are accepted at the discretion of the Department. Financial aid is available to qualified students through University Scholarships, teaching assistantships, and scholarships from outside agencies. Write to the Coordinator of Graduate Affairs for details of current policy.

STAFF:

E. M. Bjorklund, Ph.D., Chicago, 1955, Associate Professor—cultural
R. W. Butler, Ph.D., Glasgow, 1973, Associate Professor—recreational
D. G. Cartwright, Ph D., Western Ontario, 1973, Associate Professor—Canadian studies
K. B. Cawker, Ph.D., Simon Fraser, 1978, Assistant Professor—biogeography and palynology
R. G. Cecil, Ph.D., McGill, 1973, Assistant Professor—economic (Caribbean)
W. R. Code, Ph.D., UC, Berkeley, 1971, Associate Professor—urban
M. F. Goodchild, Ph.D., McMaster, 1969, Professor—quantitative methods
H. A. Hosse, Ph.D., Ottawa, 1962, Professor—urban and regional planning
D. G. Janelle, Ph.D., Michigan State, 1966, Associate Professor—spatial forecasting, urban conflict, transportation
R. H. King, Ph.D., Saskatchewan, 1969, Associate Professor—geomorphology, soils
B. H. Luckman, Ph.D., McMaster, 1973, Associate Professor—geomorphology
D. M. Mark, Ph.D., Simon Fraser, 1977, Assistant Professor—quantitative methods, theoretical geomorphology
R. McDaniel, M.A., Western Ontario, 1964, Associate Professor—geography of the future
N. L. Nicholson, Ph.D., Ottawa, 1951, Ed.D., Toronto, 1975, Senior Professor and Chairman—Canada, cartology
R. W. Packer, M.A., Cantab., 1948, Professor—geomorphology
A. K. Philbrick, Ph.D., Chicago, 1949, Professor Emeritus—cultural
E. G. Pleva, Ph.D., Minnesota, 1937, Professor Emeritus—resources planning, Great Lakes area
H. W. Taylor, Ph.D., Maryland, 1962, Associate Professor—population (Latin America)
M. J. Troughton, Ph.D., Western Ontario, 1970, Associate Professor—agricultural
W. Warntz, Ph.D., Pennsylvania, 1955, FRSC Professor—theoretical geography, macrogeographic systems, history and philosophy of science
C. F. J. Whebell, Ph.D., London, 1961, Associate Professor—political
W. R. Wightman, Ph.D., 1964, Associate Professor—historical

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-6/30/80:

Ph.D.:

Hinckley, T. "Sequential Visual Imagery to Assess Change: West Midlands Topographic Sample, 1870-1961," 1979.* Mf., National Library, Ottawa.

Udofia, W. "Factors of Co-operative Development: Guyana's Experience in Modernisation." 1980.* Mf., National Library, Ottawa.

Master's:

Boost, B. "A Search for True Anomalies in the Distribution of Site-Specific Cancers, Ontario, 1971-1976," 1979.*

Hall, J. "A Spatial Analysis of a Health Care Delivery System," 1980.*

Harrington, C. "The Influence of Location on the Development of an Indian Community at the Rapids of the St. Mary's River," 1979.*

Holland, D. "The Pollen Stratigraphy of Two Holocene Sections in Sunwapta Pass, Jasper National Park, Alberta," 1980.*

Kyro, W. "The Centre-City: A Design Proposal for London, Ontario," 1980.*

Pearce, S. "Natural Hazard Emergencies in Ontario: Case Studies in Administrative Responses and Policy Implications at the Municipal Level," 1980.*

Wilfrid Laurier University

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1960 GRADUATE PROGRAM FOUNDED: 1967

DEGREES OFFERED: M.A.

GRANTED 7/1/79-6/30/80: 9

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 11

CHAIRMAN: Dr. Russell Muncaster

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Dr. H. E. Parson, Graduate Officer, Department of Geography, Wilfrid Laurier University,
Waterloo, Ontario, Canada N2L 3C5
Telephone (519) 884-1970, ext. 288

PROGRAMS AND RESEARCH FACILITIES: The Department of Geography offers courses and research guidance at the Master's level in the fields of: (1) applied physical geography, (2) cultural and historical geography, (3) economic and urban geography, and (4) resources management.

There are two options from which a graduate student may choose. The thesis option normally involves completion of a minimum of four term courses and a thesis. Participation in graduate colloquia and field trips is normally required.

The non-thesis option allows completion of the M.A. program through course work. Nine term or equivalent graduate courses are required. As well the student is

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restricted to a maximum of four term courses in any one of the general areas of geography offered by this department. Cartographic and computer facilities are available.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID:

Academic Plan—Academic Year, September to April. *Admission Requirements*—A minimum of second class honours or B standing in the graduating year of an Honours Program in Geography or its equivalent. *Financial Aid*—Department Teaching Fellowships with a value of $3100 per academic year. Additional Teaching Fellowships valued at $1550 are available in the summer months. University scholarships valued at $1000 are also available.

STAFF:

Barry N. Boots, Ph.D., Rutgers, 1972, Associate Professor—locational analysis, urban, quantitative

Jerry A. Hall, Ph.D., Clark, 1973, Associate Professor—physical, resources, climatology

C. Grant Head, Ph.D., Wisconsin, 1971, Associate Professor—historical, cultural, cartography

Alfred Hecht, Ph.D., Clark, 1972, Associate Professor—economic, urban

Kenneth Hewitt, Ph.D., London, 1967, Professor—natural hazards, mountain environments, ecological theory

Ian A. McKay, M.A., Western Ontario, 1966, Assistant Professor—cultural, historical

John H. McMurry, Ph.D., Michigan, 1950, Professor—resources, land and wildlife management

Russell W. Muncaster, Ph.D., Clark, 1972, Associate Professor—urban, quantitative, economic

Helen E. Parson, Ph.D., Kentucky, 1976, Assistant Professor—resources, rural

Houston C. Saunderson, Ph.D., Toronto, 1974, Associate Professor—geomorphology, sedimentation

Gunars Subins, Ph.D., Western Ontario, 1974, Associate Professor—physical, geomorphology

Herbert A. Whitney, Ph.D., Michigan, 1962, Associate Professor—geographic thought and method, cultural, historical

Bruce S. Young, Ph.D., Natal, 1972, Professor—economic, tourism, developing world

TITLES OF THESES COMPLETED 7/1/79–6/30/80:

Master's:

Ahonen, Jeffrey. "The Impact of Physical Design and Surrounding Land Use on Residents' Perceptions and Attitudes Towards High Density Housing," 1980.

Bellamy, Kevin. "Sedimentary Structures and Paleocurrents in a Flashy Channel," 1979.

Hawley, Bryan. "The Atlas of Inuit Land Use: A Case Study of Cartographic Communication," 1979.

Morris, Janet. "An Investigation of Land Prices and Related Factors in Wellington County From 1961-71," 1979.

Nephew, John. "Environmental Reconstruction in the Orangeville Moraine," 1980.
Thorpe, Robert. "Hydrographic Regions of Northern Ontario," 1979.

University of Windsor

DEPARTMENT OF GEOGRAPHY

DATE FOUNDED: 1965 GRADUATE PROGRAM FOUNDED: 1967

DEGREES OFFERED: M.A.

GRANTED 7/1/79–6/30/80: 4

GRADUATE STUDENTS IN RESIDENCE: 12
NOT IN RESIDENCE: 7

CHAIRMAN: Anthony Blackbourn

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Graduate Secretary, Department of Geography, University of Windsor, Windsor, Ontario, Canada N9B 3P4
Telephone (519) 253-4232, ext. 446

PROGRAMS AND RESEARCH FACILITIES: Instruction and research guidance are offered by the Department in the fields of Climatology and Geomorphology; Historical Geography; Regional Studies, particularly of Latin America, Arctic Canada, the Soviet Union, Western Europe, and South Asia; Resource and Industrial Geography; Urban Geography and Planning; Population; and Medical Geography. Interdisciplinary programs are available with other Departments in the University, and with other universities, in both physical and regional geography.

The University of Windsor is located on the Detroit River close to the downtown areas of both Windsor and Detroit, and to Wayne State University and the University of Michigan. The University has an IBM 3031 computer, and a new library of 1,000,000 volumes. The Department of Geography is located in Windsor Hall, with map library, cartography and physical geography laboratories, and graduate study space. The Department operates a well-equipped climatological station on campus, and offers an Arctic program at Frobisher Bay, N.W.T.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The University of Windsor offers graduate courses in the September–December and January–April semesters, though courses can be taken in Inter-Session and Summer School.

Normally a B+ average in a four-year Honors Program in geography or its equivalent (90 credits in Geography out of 132 undergraduate credits) from a recognized University admits to a one-year program. Candidates from other disciplines are admitted to a two-year program. Five semester-length courses, a

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language or computer skills requirements, and a thesis complete the M.A. degree.

Financial aid is available to excellent students through University teaching assistantships, and fellowships to a maximum of $7200, as well as from Province of Ontario graduate fellowships, Canada Council, National Research Council, and Central Mortgage and Housing Corporation.

STAFF:

Anthony Blackbourn, Ph.D., Toronto, 1968, Associate Professor and Chairman—industrial, Europe

Morris Blenman, Ph.D., McGill, 1975, Assistant Professor—transportation, social geography, Caribbean

Frank C. Innes, Ph.D., McGill, 1967, Professor—historical, Caribbean, North America, social indicators

John Jacobs, Ph.D., Colorado, 1973, Associate Professor—climatology, Arctic studies

Amrit Lall, Ph.D., Indiana, 1958, Associate Professor—population, South Asia

Placido LaValle, Ph.D., Iowa, 1965, Associate Professor—geomorphology, quantitative methods

Jack Ransome, Ph.D., Harvard, 1955, Professor—urban and applied geography

Gerald Romsa, Ph.D., Florida, 1968, Associate Professor—urban planning, Anglo-America

Marie Sanderson, Ph.D., Michigan, 1965, Professor—climatology, water balance, Great Lakes

Ihor Stebelsky, Ph.D., Washington, 1967, Associate Professor—historical, Soviet Union

Alan Trenhaile, Ph.D., Wales, 1969, Professor—coastal and glacial geomorphology

Paul Vandall, M.A., Western Ontario, 1961, Associate Professor—political, regional planning, Great Lakes

Ronald Welch, M.A., Western Ontario, 1969, Co-ordinator of Cartographic Services—cartography

TITLES OF THESES COMPLETED 7/1/79-6/30/80:

Master's:

Degroat, Meredith McLean. "An Investigation of the Adequacy of the Quality and Distribution of Urban Parkland in the City of Windsor," 1980.* Mf., National Library of Canada.

Khan, Md. Belayet Hossain. "Some Aspects of Fluvial Erosion in the Watersheds of Southern Ontario, Canada," 1980.* Mf., National Library of Canada.

Rudakas, Peter, "The Role of Frost Action on the Development of Shore Platforms; Gaspé, Quebec," 1979.* Mf., National Library of Canada.

Yum, Charles Chi Fi. "Variations in Intermetropolitan Migration Flows in Canada, 1971-76: An Analysis of Some Characteristics and Causal Factors," 1980.* Mf., National Library of Canada.

York University

GRADUATE PROGRAMME IN GEOGRAPHY

DATE FOUNDED: 1962 GRADUATE PROGRAMME FOUNDED: 1967

DEGREES OFFERED: M.A., M.Sc., Ph.D.

GRANTED 7/1/79–6/30/80: 9 M.A., 1 M.Sc., 1 Ph.D.

GRADUATE STUDENTS IN RESIDENCE: 14 M.A. 4 Ph.D.
NOT IN RESIDENCE: 18 M.A. 2 Ph.D.

DIRECTOR: Bryan H. Massam

FOR CATALOG AND FURTHER INFORMATION WRITE TO: Bryan H. Massam, Director, Graduate Programme in Geography, York University, Downsview, Ontario, Canada M3J 1P3
Telephone (416) 667-3740

PROGRAMMES AND RESEARCH FACILITIES: A doctoral programme is offered in four fields of specialisation: biogeography; cultural-historical geography; resource analysis; and urban-economic geography. The Ph.D. degree is seen as a research degree, and students are not expected to take many courses.

Opportunities for research at the M.A. level are available in most of the main branches of geography. Students wishing to specialise in biogeography can opt for an M.Sc. degree. The M.A./M.Sc. candidate chooses one of two programmes: (a) two full courses or equivalent and a thesis, (b) three full courses or equivalent and a research paper. The completion of M.A./M.Sc. requirements normally takes at least twelve months, and full-time M.A./M.Sc. students are encouraged to complete all their requirements within two years. The Department has a large faculty who have completed their undergraduate and graduate training in a great number of different institutions. The result is that the faculty encompass a wide variety of interests and points of view. Facilities for graduate work in Geography are housed mainly in the Ross Building, and include office and workroom space, a departmental library, an electronic map digitizer, remote APL terminals and a physical geography laboratory equipped for a wide range of analytical work including soil, water, pollen, and vegetation analysis. Holdings of the Scott Library at York are extensive both in Geography and in cognate fields. In addition there are significant libraries and archives elsewhere in Metropolitan Toronto. The University's computer facilities are based on ITEL AS-6 and DEC 10, and the Department of Geography employs its own full-time programmer.

ACADEMIC PLAN, ADMISSION REQUIREMENTS, AND FINANCIAL AID: The academic session extends from mid-September until late March, leaving spring and summer free for writing the thesis or research paper, or conducting field work. The basic admission requirement at the M.A./M.Sc. level is a four-year first degree after senior matriculation or an Honours degree from a recognized university, or with equivalent qualifications, and with at least B (second class) standing. Certain courses have specific prerequisites, and these are listed in the Calendar of the Faculty of Graduate Studies. Applicants to the doctoral programme should expect to complete their M.A./M.Sc. by the time they hope to enter the Ph.D. programme.

The programme can normally offer teaching assistantships to all full-time graduate students. In addition, first class students may be offered a York scholarship which is currently valued at $2500. Geography students are also encouraged to apply for awards offered by a variety of external agencies including the Ontario Government (Ontario Graduate Scholarships), Social Sciences and Humanities Research Council of Canada, Central Mortgage and Housing Corporation, Natural Sciences and Engineering Research Council Canada and the Transportation Development Agency.

GRADUATE FACULTY:

Frank A. Barrett, Ph.D., Michigan State, 1973, Associate Professor—cultural, migration, medical

Ronald Bordessa, Ph.D., Liverpool, 1971, Associate Professor—urban, perception studies, geographic theory

Ian A. Brookes, Ph.D., McGill, 1970, Associate Professor—geomorphology, Pleistocene environments

James M. Cameron, Ph.D., Glasgow, 1970, Associate Professor—historical, Canadian pioneer settlements, migration

J. Tait Davis, Ph.D., Clark, 1960, Professor—economic, urban, regional economic development and planning, Kenya

William C. Found, Ph.D., Florida, 1966, Professor—economic, rural resource use, quantitative methods, computer-aided instruction

Donald B. Freeman, Ph.D., Chicago, 1971, Associate Professor—economic, transportation and trade, quantitative methods, Africa

James R. Gibson, Ph.D., Wisconsin, 1967, Professor—historical and contemporary geography of Russia

Bryn Greer-Wootten, Ph.D., McGill, 1968, Associate Professor—urban, internal structure of cities, quantitative methods, research methodology

Conrad E. Heidenreich, Ph.D., McMaster, 1970, Professor—cultural, site analysis, Indians of North America

Alan R. Hill, Ph.D., Belfast, 1968, Associate Professor—ecology, resource management

H. Peter M. Homenuck, Ph.D., Cincinnati, 1969, Associate Professor—urban, community and regional planning

Martin C. Kellman, Ph.D., Australian National, 1967, Professor—biogeography, tropical environments

William C. Mahaney, Ph.D., Colorado, 1970, Associate Professor and Chairman, Department of Geography, Atkinson College—pedology, geomorphology, Pleistocene environments

John U. Marshall, Ph.D., Toronto, 1968, Associate Professor—urban, regional systems of cities, research methodology

Bryan H. Massam, Ph.D., McMaster, 1969, Professor and Director, Graduate Programme in Geography—urban, public facility location problems, planning

H. Roy Merrens, Ph.D., Wisconsin, 1962, Professor—historical, North America

C. David Morley, Ph.D., Australian National, 1966, Associate Professor—urban, behavioral studies, recreation, geography and policy-making

Robert A. Murdie, Ph.D., Chicago, 1968, Associate Professor—urban, internal structure of cities, quantitative methods

Glen B. Norcliffe, Ph.D., Bristol, 1970, Associate Professor—economic, regional development, quantitative methods

John P. Radford, Ph.D., Clark, 1974, Associate Professor—urban historical geography, internal structure of cities

Arthur J. Ray, Ph.D., Wisconsin, 1971, Associate Professor—cultural, historical, North America

Edward S. Spence, Ph.D., Alberta, 1971, Associate Professor and Chairman, Department of Geography, Faculty of Arts—hydrology and water resources, resource management

Gerald E. Walker, Ph.D., UC, Berkeley, 1970, Associate Professor—cultural, rural, settlement and social structure, diffusion

John Warkentin, Ph.D., Toronto, 1960, Professor—historical, settlement of Canada, history of geography in Canada

Paul F. Wilkinson, Ph.D., Toronto, 1974, Associate Professor—recreation

Roy I. Wolfe, Ph.D., Toronto, 1956, Professor—recreation, transportation

J. David Wood, Ph.D., Edinburgh, 1962, Professor—historical migration, settlement and frontiers, Canada

OTHER FULL-TIME FACULTY:

Donald MacIver, M.Sc., Alberta, 1969, Assistant Professor—climatology, resource management

TITLES OF THESES AND DISSERTATIONS COMPLETED 7/1/79-5/31/80:

Ph.D.:

O'Mara, James. "Urbanization in Tidewater Virgina during the eighteenth century: a study in historical geography," 1979.

Master's:

Duncan, David. "The influence of Highway 401 on the location decisions of new manufacturing establishments in Southern Ontario," 1979. (M.A.)

Weaver, Marcia. "The effects of insularization on the tree species composition of Southern Ontario woodlots," 1979. (M.Sc.)

Staff Directory

Aangeenbrug, Robert T.   Kansas
Abbott, Elizabeth F.   Florida
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Adams, Russell B.   Minnesota
Adams, William G.   E. Kentucky
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Agnew, John A.   Syracuse
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Aldrich, Frank T.   Arizona State
Alexander, Charles S.   Illinois
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Allan, Nigel J. R.   Louisiana
Allard, Michael   Laval
Allderdice, William H.   Memorial
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Allen, James R.   Arkansas
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Anderson, Duncan M.   Carleton
Anderson, Eric   George Mason
Anderson, Lawrence C.   Mankato State
Anderson, Thomas D.   Bowling Green State
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Andrews, Howard F.   Toronto
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Armstrong, R. Warwick   Hawaii
Armstrong, Warwick   McGill
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Ayoade, J. O.   Hawaii

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Bacon, Robert S.   Miami-Ohio
Bagchi, Deipica   SIU-Edwardsville
Bahre, Conrad J.   Davis
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Baker, Alan M.   Toronto
Baker, Earl J.   Florida State
Baker, Marvin W., Jr.   Oklahoma
Baker, Simon   E. Carolina
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Barber, Melvin C.   Memphis State
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Bariss, Nicholas   Nebraska-Omaha
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Basile, Robert M.   Toledo
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Bastian, Robert W.   Indiana State

Batchelder, R. B. Boston
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Beiswenger, Ronald Wyoming
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Bennett, Charles F. UCLA
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Bennett, Don C. Indiana
Bennett, Iven New Mexico
Berdoulay, Vincent Ottawa
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Berg, Richard H. W. Washington
Bergen, John V. W. Illinois
Berger, Rainer UCLA
Bergmann, John F. Alberta
Bergsteinsson, J. L. Saskatchewan
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Bernier, Jacques Laval
Berry, Brian Boston
Berry, Leonard Clark
Best, A. C. G. Boston
Bettis, Norman C. Illinois State
Beveridge, Ronald M. W. Illinois
Beyer, Jacquelyn L. Colorado
Beyers, William B. Washington
Bhardwaj, Surinder M. Kent State
Bhatt, Bharat Texas
Biechler, Michael CSU, Fresno
Bier, James A. Illinois
Biggs, Huntley H. S. Mississippi
Bingham, James M. W. Kentucky
Bird, J. Brian McGill
Birdsall, Stephen N. Carolina-Chapel Hill
Bjorklund, E. M. W. Ontario
Black, Lloyd D. N. Illinois
Black, William R. Indiana
Blackbourn, Anthony Windsor
Bladen, W. A. Kentucky
Blanchard, W. A. Oklahoma State
Bland, Warren R. CSU, Northridge
Blaut, James B. Illinois-Chicago Circle
Blauvelt, John F. W. Illinois
Bleiker, Hans Wyoming
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Bloemer, Hubertus H. L. Ohio
Bloomfield, Gerald T. Guelph
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Bockemuehl, Harold W. Montana
Bodman, Andrew R. VPI&SU
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Boisvert, Jean-Jacques Sherbrooke
Boland, John J. SIU-Carbondale,
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Bone, R. M. Saskatchewan
Bonine, Michael E. Arizona
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Boots, Barry N. Wilfrid Laurier
Borchert, John R. Minnesota
Bordessa, Ronald York
Bordne, Erich F. Kent State
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Bowden, Kenneth L. N. Illinois
Bowden, M. George Texas
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Brazel, Anthony J. Arizona State
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Brewster, Gordon R. Michigan
Bridges, Kent Hawaii
Bridwell, James G. SIU-Edwardsville
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Brinkmann, Waltraud Wisconsin-Madison
Britton, John N. H. Toronto
Brockmann, Vernon W. Chicago State
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Brodsky, Harold Maryland
Brook, George A. Georgia

Brooke, Clarke H., Jr.   Portland State
Brooker-Gross, Susan R.   VPI&SU
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Brooks, William D.   Indiana State
Brooner, William   Towson State
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Brown, Harrison E.   Hawaii
Brown, Kathleen M.   Michigan
Brown, Lawrence A.   Ohio State
Brown, Marilyn A.   Illinois
Brown, Michael C.   Alberta
Brown, R. C.   Simon Fraser
Brown, Ralph C.   North Dakota
Brown, Robert H.   Wyoming
Brown, S. Earl   Ohio State
Brown, W. J.   Manitoba
Browning, Clyde   N. Carolina-Chapel Hill
Brueckheimer, W. R.   Florida State
Bruman, Henry J.   UCLA
Brummell, Arden C.   McMaster
Brunn, Stanley   Kentucky
Brunnschweiler, Dieter   Michigan State
Brush, John E.   Rutgers
Brush, Lucien   Johns Hopkins
Bryan, Rorke   Toronto
Bryant, Christopher R.   Waterloo
Bryson, Reid   Wisconsin-Madison
Buckholts, Paul O.   E. Michigan
Budin, Morris   SUNY-Binghamton
Buford, Joseph C.   Bowling Green State
Bullamore, Henry W.   S.W. Louisiana
Bullock, Ronald A.   Waterloo
Bunce, Michael   Toronto
Bunkse, Edmunds V.   Delaware
Bunting, Brian T.   McMaster
Bunting, Trudi   Waterloo
Bureau, Luc   Laval
Burghardt, Andrew F.   McMaster
Burke, Terence   Massachusetts
Burns, Elizabeth K.   Utah
Burt, James E.   Illinois
Burton, Ian   Toronto
Bushong, Allen D.   South Carolina
Bussières, Paul   Laval
Bussing, Charles   Kansas State
Butler, Joseph H.   SUNY-Binghamton
Butler, Orton C.   Memphis State
Butler, R. W.   W. Ontario
Buttimer, Anne   Clark
Butzer, Karl W.   Chicago
Byrne, Roger   Berkeley
Byron, William   CSU, Los Angeles

Cadwallader, Martin T.   Wisconsin-Madison
Cady, John   Johns Hopkins
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Caldwell, Harry H.   Idaho
Calef, Wesley C.   Illinois State
Calkins, Hugh   SUNY-Buffalo
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Campbell, Ian A.   Alberta
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Cantin, Adelord J.   Indiana State
Capone, Donald L.   Miami
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Carey, George W.   Rutgers
Carlson, Alvar W.   Bowling Green State
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Carney, George O.   Oklahoma State
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Carter, James R.   Tennessee
Cartwright, D. G.   W. Ontario
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Castillon, David   SW Missouri State
Castner, H. W.   Queen's
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Caviedes, Cesar N.   Regina, Florida
Cawker, K. B.   W. Ontario
Cecil, R. G.   W. Ontario
Chakravarti, A. K.   Saskatchewan
Chamberlin, Charles   Johns Hopkins
Chang, Jen-hu   Hawaii
Chang, Kang-Tsung   North Dakota
Chang, Kuei-sheng   Washington
Chang, Sen-dou   Hawaii
Chang, Stephen S.   Bowling Green State
Changnon, Stanley   Illinois
Chapman, J. D.   British Columbia
Chapman, Murray   Hawaii
Chardon, Roland E.   Louisiana State
Charlton, Robert B.   Alberta
Charron Maureen A.   Maryland

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Chase, Harrison V. Florida State
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Choquette, Roch Sherbrooke
Chow, Willard T. Hawaii
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Chung, Roy Northern Iowa
Church, M. British Columbia
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Clark, Robert E. Northern Iowa
Clark, Thomas A. Rutgers
Clark, William A. V. UCLA
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Clarkson, James D. Michigan
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Cleveland, John H. Indiana State
Clibbon, Peter Brooke Laval
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Cockrill, W. Willard W. Kentucky
Code, W. R. W. Ontario
Coffin, Harry CSU, Los Angeles
Cohen, Saul B. Clark
Cohon, Jared Johns Hopkins
Colakovic, Branko Mankato State
Cole, Alan L. N. Illinois
Cole, Chester F. CSU, Fresno
Cole, David B. N. Colorado
Coleman, Derrich Towson State
Collins, Basil A. Toledo
Collins, Charles O. N. Colorado
Collins, Janet R. W. Washington
Collins, William F. CSU, Chico
Colombini, Victor Ohio State
Colombo, Albert A. San Diego State
Comeaux, Malcolm L. Arizona State
Conkling, Edgar C. SUNY-Buffalo
Conner, Doral Glen W. Kentucky
Conway, Dennis Indiana
Conzen, Michael P. Chicago
Cook, Earl Texas A&M
Cooper, Karyn G. Memorial
Copley, Richard British Columbia
Corbet, John H. Memphis State
Cordes, Lawrence D. Calgary
Corey, Kenneth E. Maryland
Costa, Frank Akron
Costa, John E. Denver
Coulson, Michael R. C. Calgary
Court, Arnold CSU, Northridge
Courtney, Dale E. Portland State
Cowen, David J. South Carolina
Cox, Carleton W. George Mason
Cox, Kevin R. Ohio State
Craig, Alan Florida Atlantic
Cramer, Robert E. E. Carolina
Crampton, C. B. Simon Fraser
Crawford, Nicholas C. W. Kentucky
Crawford, Paul Bowling Green State
Crawford, Roger J. San Francisco State
Crist, Raymond E. Florida
Critchfield, Howard J. W. Washington
Croft, Jerry D. Oklahoma State
Cromley, Robert Kentucky
Crosby, Alfred W., Jr. Texas
Crosby, John A. CSU, Fresno
Cross, Clark I. Florida
Cross, Ralph D. S. Mississippi
Crowley, John H. Montana
Crowley, John M. Montana
Cuff, David J. Temple
Cunningham, F. F. Simon Fraser
Currey, Donald R. Utah
Curry, Leslie Toronto
Curtis, James R. Miami
Cutler, Irving Chicago State
Cutshall, Alden S. Illinois-Chicago Circle
Cutter, Susan Caris Rutgers
Cybriwsky, Roman A. Temple

Dacey, Michael F. Northwestern
Dagodag, William Tim CSU, Northridge
Dahlberg, Richard E. N. Illinois
Dahms, Fredric A. Guelph
Daidone, Donald VPI&SU
Dale, Edmund H. Regina
Daly, Christopher J. Montana
Dando, William A. North Dakota
Darden, Joe T. Michigan State
Dart, John O. Portland State
Davenport, William A. Mankato State
Davidson-Arnott, Robin G. Guelph
Davidson, William V. Louisiana State
Davies, Christopher S. Texas

Davies, John A. McMaster
Davies, Wayne K. D. Calgary
Davis, J. Tait York
Davis, James L. W. Kentucky
Davis, Jerry M. Indiana
Davis, John C. Kansas
Davis, Robert George Mason
Day, J. C. Simon Fraser
Day, Michael Wisconsin-Milwaukee
Day, Richard L. Idaho
Dean, William G. Toronto
Dear, Michael J. McMaster
Dearden, P. British Columbia
deBlij, Harm J. Miami
Decker, Bryce G. Hawaii
Decker, Wayne L. Missouri-Columbia
De Koninck, Rodolphe Laval
deLaubenfels, David J. Syracuse
DeLucia, Alan A. Idaho
Demko, George J. Ohio State
Denevan, William M. Wisconsin-Madison
Denike, K. British Columbia
Denis, Paul-Yves Laval
Denney, Evan Montana
Dent, Borden D. Georgia State
Desbarats, Jacqueline M. Northwestern
Deshler, Walter W. Maryland
Deskins, Donald R., Jr. Michigan
DeVorsey, Louis Georgia
Dewey, Kenneth F. Nebraska-Lincoln
Dickason, David G. W. Michigan
Dicken, Samuel N. Oregon
Dickinson, Robert E. Arizona
Diem, Aubrey Waterloo
Dienes, Leslie Kansas
Dierickx, C. Wallace NE Illinois
Dietz, John L. N. Colorado
Diffenderfer, Norman R. Towson State
Dilamarter, Ronald R. W. Kentucky
DiLisio, James E. Towson State
Dillman, C. Daniel N. Illinois
Dillon, John Towson State
Dillon, Lowell I. Ball State
Dima, Nicholas George Mason
Dingemans, Dennis J. Davis
Dobson, Michael W. SUNY-Albany
Doeppers, Daniel F. Wisconsin-Madison
Dohrs, Fred E. Wayne State
Donahue, John J. Montana
Donaldson, Alan C. W. Virginia
Dooley, Mary T. Mankato State
Doolittle, William E. Mississippi State
Dougherty, Percy H. Cincinnati
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Douglas, Arthur V. Nebraska-Lincoln
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Dozier, Jeffrey C. Santa Barbara
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Draper, Dianne L. Memorial
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Drummond, Robert R. Indiana State
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Dufournaud, Christian Waterloo
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Dulka, Michael Clark
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Duncan, J. S. British Columbia
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Dupree, Herbert C. Florida
Durrenberger, Robert W. Arizona State
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Dutt, Ashok Akron
Dworkin, Daniel Clark
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Earney, Fillmore C. F. N. Michigan
Easton, Robert F. NE Illinois
Eaton, David J. Texas
Ebert, Charles H. V. SUNY-Buffalo
Edelen, Walter T. Toledo
Eder, Herbert M. CSU, Hayward
Edgell, Michael C. R. Victoria
Edwards, Clinton R. Wisconsin-Milwaukee
Edwards, Jay D. Louisiana State
Edwards, Larry J. Nebraska-Lincoln
Efteland, Jon N. Northern Iowa
Ehrhardt, Dennis K. SW Louisiana
Eichenlaub, Val L. W. Michigan
Eidemiller, Donald I. San Diego State
Eidt, Robert C. Wisconsin-Milwaukee
Eilers, H. Peter CSU, Fullerton
Eliot Hurst, M. E. Simon Fraser
Ellefsen, Richard A. San José State
Elliott, Deborah L. Wyoming
Elmes, Gregory A. W. Virginia

Emery, Byron E. Toledo
England, John H. Alberta
English, Paul Ward Texas
Engstrom, Wayne N. CSU, Fullerton
Enright, N. McGill
Entrikin, J. Nicholas UCLA
Eoff, Kay M. Florida
Epperson, Terry E. Appalachian State
Epstein, Bart J. Kent State
Erb, David K. Waterloo
Erhart, Rainer R. W. Michigan
Ericksen, Robert Wisconsin-Milwaukee
Erickson, Frank A. Kent State
Erickson, Kenneth A. Colorado
Erickson, Rodney A. Pennsylvania State
Ervin, Roger E. CSU, Fresno
Espenshade, Edward B. Northwestern
Estes, John E. Santa Barbara
Evans, Simon M. Memorial
Evenden, L. J. Simon Fraser
Ewing, Gordon, McGill
Exline, Christopher H. Colorado
Eyre, John D. N. Carolina-Chapel Hill
Eyton, J. Ronald South Carolina

Fahey, Barry D. Guelph
Fairbairn, Kenneth J. Alberta
Farley, A. L. British Columbia
Farmer, Geoffrey H. Memorial
Farrell, Barbara E. Carleton
Farrell, John P. N. Michigan
Fehrenbach, Joseph George Washington
Fellmann, Jerome D. Illinois
Fende, Ivan J. N. Michigan
Fentem, Arlin D. W. Illinois
Fernald, Edward A. Florida State
Fesenmaier, Daniel R. Oklahoma
Field, Chris Montana
Field, Neil C. Toronto
Field, Richard T. Delaware
Field, Thomas P. Kentucky
Filion, Louise Laval
Finch, William A., Jr. San Diego State
Fincher, Ruth McGill
Finchum, George A. E. Tennessee
Firman, David Towson State
Fisher, Albert L. Utah
Fisher, Jack Johns Hopkins
Fisher, James S. Georgia
Fishman, Allan R. San José State

Fite, Robert C. Oklahoma State
FitzGibbon, J. E. Saskatchewan
Fitzsimmons, Allan George Washington
Fitzsimons, Dennis E. Utah
Flannery, James J. Wisconsin-Milwaukee
Fleming, Douglas K. Washington
Florin, John W. N. Carolina-Chapel Hill
Fonaroff, L. Schuyler Maryland
Fonseca, James W. George Mason
Ford Derek C. McMaster
Ford, Larry R. San Diego State
Forward, Charles N. Victoria
Foster, Harold D. Victoria
Foster, Leslie T. Victoria
Foster, R. H. Manitoba
Fotheringham, A. Stewart Indiana
Found, William C. York
Fowler, Gary L. Illinois-Chicago Circle
Fowler, Phillip M. Wyoming
Fox, Michael F. Carleton
Franckowiak, Eugene N. Toledo
Frank, Ralph W. Bowling Green State
Frank, Thomas D. Illinois
Frazier, John SUNY-Binghamton
Fredrich, Barbara E. San Diego State
Freeman, Donald B. York
French, Hugh Ottawa
Frenkel, Robert E. Oregon State
Frey, Glen R. Bowling Green State
Friberg, Justin C. Kentucky
Frizado, Joseph P. N. Carolina-Charlotte
Frost, Melvin J. Arizona State
Frost, Robert P. SIU-Edwardsville
Frye, Howard E. Memphis State
Fryer, Donald W. Hawaii
Fryman, James F. Northern Iowa
Fuchs, Roland J. Hawaii
Fuller, Anthony M. Guelph
Fuller, Gary A. Hawaii
Fuller, John W. Iowa
Fung, K. K. Saskatchewan
Furuseth, Owen J. N. Carolina-Charlotte

Gab, Orville S. Dakota State
Gabler, Robert E. W. Illinois
Gade, Daniel W. Vermont
Gade, Ole Appalachian State
Gagnon, Hugues Ottawa
Gagnon, Robert Sherbrooke
Gaile, Gary L. Northwestern

Gaines, John F. CSU, Northridge
Galloway, J. H. Toronto
Gambill, Brad Oklahoma State
Ganyard, David W. W. Illinois
Gardner, James S. Waterloo
Garnier, Benjamin McGill
Gassaway, Alexander R. Portland State
Gauthier, Howard L. Ohio State
Gavis, Jerome Johns Hopkins
Geib, Margaret Akron
Gentilcore, R. Louis McMaster
George, Glenn CSU, Fullerton
Gerlach, Russel SW Missouri State
Gersmehl, Philip J. Minnesota
Gesler, Wilbert M. Rutgers
Getis, Arthur Illinois
Geurts, Marie-Anne Ottawa
Gibson, E. M. Simon Fraser
Gibson, James R. York
Gibson, Lay J. Arizona
Gilbert, R. Queen's
Gildersleeve, C. R. Nebraska-Omaha
Gilliam, John Montana
Gilliard, Rickie Indiana
Gilmartin, Patricia P. Victoria
Ginsburg, Norton Chicago
Giovinetto, Mario B. Calgary
Girard, William W. Mankato State
Glacken, Clarence J. Berkeley
Gladfelter, Bruce G. Illinois-Chicago Circle
Glick, T. F. Boston
Goad, Sharon I. Louisiana State
Gober, Patricia Arizona State
Goff, James F. Mankato State
Goggins, Lathardus Akron
Goheen, P. G. Queen's
Gohstand, Robert CSU, Northridge
Goldfarb, William Rutgers
Golledge, Reginald G. Santa Barbara
Gonzalez, Alfonso Calgary
Good, Charles M. VPI&SU
Goodchild, M. F. W. Ontario
Goodman, James M. Oklahoma
Goodman, Robert J. Wayne State
Goodwin, Cecil W. Pennsylvania State
Goodwin, Kenneth J. S. Mississippi
Gordon, Burton L. San Francisco State
Gordon, Jeffrey J. Bowling Green
Gordon, Marvin George Washington
Gore, Dorothy J. SIU-Edwardsville
Gosenfeld, Norman CSU, Los Angeles
Gosling, L. A. Peter Michigan
Gosnold, William D. Nebraska-Omaha
Gossette, Franklin E. Delaware
Gough, G. Patrick Guelph
Gould, Peter R. Pennsylvania State
Goward, Samuel N. Columbia
Graf, William L. Arizona State
Graff, Thomas O. Arkansas
Granberg, Hardy McGill
Granger, Orman Berkeley
Green, Jerry E. Miami-Ohio
Greenberg, Michael R. Rutgers
Greenland, David E. Colorado
Greenwood, Brian Toronto
Greenwood, Ned H. San Diego State
Greer, Charles E. Indiana
Greer-Wootten, Bryn York
Gregor, Howard F. Davis
Gregory, Mark Oklahoma State
Griffin, Donald W. W. Illinois
Griffin, Ernst C. San Diego State
Griffith, Daniel A. SUNY-Buffalo
Grima, Angelo P. Toronto
Grimes, Thomas P. Ball State
Gritzner, Charles F. S. Dakota State
Gritzner, Janet H. S. Dakota State
Grivetti, Louis E. Davis
Grogger, Paul K. Colorado
Groop, Richard Michigan State
Grossman, Lawrence S. VPI&SU
Groves, Paul A. Maryland
Gruntfest, Eve C. Colorado
Guelke, Leonard Waterloo
Guernsey, James L. Indiana State
Guest, B. Ross N. Illinois
Gunter, Charles E. Tennessee
Gvosdetsky, Vasyl M. Utah
Gwyn, Hugh Sherbrooke

Haack, Barry N. Ball State
Haag, William G. Louisiana State
Haddock, Kenneth Towson State
Hadley, Richard F. Denver
Hafner, James A. Massachusetts
Hage, Keith D. Alberta
Hager, Walter R. George Mason
Haglund, Donn K. Wisconsin-Milwaukee
Haiman, Richard CSU, Chico
Hale, Gerry A. UCLA
Hall, E. Lorene E. Michigan
Hall, Frederick L. McMaster

Hall, Jerry A.	Wilfrid Laurier
Hall, Stephen A.	North Texas State
Hamelin, Louis-Edmond	Laval
Hamill, Louis	Calgary
Hamilton, William	Rutgers
Hammond, Edwin H.	Tennessee
Han, Sin-Fong	CSU, Los Angeles
Hance, William A.	Columbia
Handcock, Gordon	Memorial
Hanke, Steve	Johns Hopkins
Hankins, William W.	E. Carolina
Hannes, Gerald P.	CSU, Fullerton
Hannon, Bruce M.	Illinois
Hansen, Carl	Riverside
Hanson, Susan	SUNY-Buffalo
Hanten, Edward W.	Akron
Hardwick, Walter G.	British Columbia
Hare, F. Kenneth	Toronto
Haring, L. Lloyd	Arizona State
Harlin, John M.	Oklahoma
Harman, Jay R.	Michigan State
Harnapp, Vern	Akron
Harper, Robert A.	Maryland
Harries, Keith D.	Oklahoma State
Harrington, John A., Jr.	Oklahoma
Harris, Chauncy D.	Chicago
Harris, R. C.	British Columbia
Harris, Stuart A.	Calgary
Harrison, Peter	Ottawa
Hart, John Fraser	Minnesota
Hart, Richard	Illinois State
Hartgen, David T.	SUNY-Albany
Hartshorn, Joseph H.	Massachusetts
Hartshorn, Truman A.	Georgia State
Hartshorne, Richard	Wisconsin-Madison
Harvey, David	Johns Hopkins
Harvey, Milton E.	Kent State
Haupert, John S.	SUNY-Buffalo
Havens, James M.	Rhode Island
Hawkes, H. Bowman	Utah
Hawley, Arthur J.	N. Carolina-Chapel Hill
Hay, John	British Columbia
Haynes, Kingsley E.	Indiana
Hays, H. Donald	Alabama
Hayter, R.	Simon Fraser
Hayuk, Hlib S.	Towson State
Head, C. Grant	Wilfrid Laurier
Hecht, Alfred	Wilfrid Laurier
Hecht, Melvin E.	Arizona
Hecht, Susanna B.	UCLA
Hecock, Richard D.	Oklahoma State
Hegen, Edmund E.	W. Kentucky
Hehr, John G.	Arkansas
Heider, Noland R.	Indiana U. of Pa.
Heidenreich, Conrad E.	York
Heidt, Herbert C.	Clark
Heiges, Harvey F.	San Diego State
Heintzelman, Oliver H.	Oregon State
Heiser, W. Wayne	SUNY-Albany
Helburn, Nicholas	Colorado
Helgren, David M.	Davis
Helin, Ronald A.	CSU, Fullerton
Heller, Charles F.	W. Michigan
Henderson, David A.	CSU, Northridge
Henderson, Floyd M.	SUNY-Albany
Henkel, Ray	Arizona State
Henry, James A.	Florida
Henry, Norah F.	SUNY-Binghamton
Hepner, George F.	W. Michigan
Herman, Vera L.	Ohio State
Herold, Laurance C.	Denver
Herrem, Peter D.	Calgary
Hess, Charles F.	SIU-Edwardsville
Hetrick, Virginia R.	Florida
Hewes, Leslie	Nebraska-Lincoln
Hewings, G. J. D.	Illinois
Hewitt, Kenneth	Wilfrid Laurier
Heyl, R. James	Georgia
Hickin, E. J.	Simon Fraser
Hickok, Floyd C.	North Dakota
Higgs, Gary K.	Mississippi State
Highsmith, Richard M., Jr.	Oregon State
Hill, A. David	Colorado
Hill, Alan R.	York
Hilliard, Sam B.	Louisiana State
Hills, Theo L.	McGill
Hiltner, John	Bowling Green State
Hobgood, Jay S.	Nebraska-Lincoln
Hodge, David C.	Washington
Hodgkins, Jordan A.	Kent State
Hodgson, M. John	Alberta
Hodler, Thomas W.	W. Michigan
Hoerauf, Eugene A.	W. Washington
Hoffman, George W.	Texas
Hoffman, Lawrence A.	Toledo
Hoffman, Wayne L.	W. Kentucky
Hoffpauir, Robert	CSU, Northridge
Hogan, Edward Patrick	S. Dakota State
Holcomb, Briavel	Rutgers
Hole, Francis D.	Wisconsin-Madison
Hollingsworth, John M.	Indiana
Holly, Brian P.	Kent State
Holmes J.	Queen's
Holmes, William M.	North Texas State

Holtgrieve, Donald G.   CSU, Hayward
Holz, Robert K.   Texas
Holzner, Lutz   Wisconsin-Milwaukee
Homenuck, H. Peter M.   York
Honey, Rex D.   Iowa
Hook, John C.   Indiana State
Hooks, W. Gary   Alabama
Hooson, David J. M.   Berkeley
Hordon, Robert M.   Rutgers
Hornbeck, David, Jr.   CSU, Northridge
Horsfall, R. B.   Simon Fraser
Horsley, A. Doyne   SIU-Carbondale
Horst, Oscar H.   W. Michigan
Horton, Frank E.   Wisconsin-Milwaukee
Hosse, H. A.   W. Ontario
Hough, Richard F.   San Francisco State
Howard, Robert B.   CSU, Northridge
Howarth, Philip J.   McMaster
Howatson, Charles H.   Victoria
Howe, George M.   E. Michigan
Howe, Robert   Indiana State
Howenstine, William   NE Illinois
Hoy, Don R.   Georgia
Hsieh, Chiao-min   Pittsburgh
Hsu, Mei-Ling   Minnesota
Hsu, Shin-yi   SUNY-Binghamton
Hudson, John C.   Northwestern
Hudson, Tim W.   S. Mississippi
Huefner, Robert P.   Utah
Huff, David L.   Texas
Huff, James O.   Illinois
Hufty, André   Laval
Hughes, John D.   N. Michigan
Hughes, Travis H.   Alabama
Hugill, Peter J.   Texas A&M
Hulbert, Francois   Laval
Hultquist, John F.   Idaho
Hultquist, Nancy B.   Idaho
Hunker, Henry L.   Ohio State
Hunter, John M.   Michigan State
Hutchinson, L. Hugh   Georgia State
Hutchinson, I.   Simon Fraser
Huttlinger, Frank D.   Alabama
Hyma, B.   Waterloo

Imperatore, William   Appalachian State
Ingalls, Gerald L.   N. Carolina-Charlotte
Innes, Frank C.   Windsor
Ironside, R. Geoffrey   Alberta
Irving, Robert M.   Waterloo
Irwin, Daniel   SIU-Carbondale
Irwin, David H.   Murray State
Issac, Ronald H.   Ohio
Isserman, Andrew   Illinois
Ives, Jack D.   Colorado
Ives, Sallie M.   N. Carolina-Charlotte

Jackson, Edgar L.   Alberta
Jackson, Philip L.   Oregon State
Jackson, W. A. Douglas   Washington
Jacobs, John   Windsor
Jacobson, Daniel   Michigan State
Jakle, John A.   Illinois
Jakubs, John F.   South Carolina
James, Preston E.   Syracuse
Janelle, D. G.   W. Ontario
Janiskee, Robert L.   South Carolina
Jarvis, Richard   SUNY-Buffalo
Jaworski, Eugene   E. Michigan
Jenkins, Alan   Missouri-Columbia
Jenks, George F.   Kansas
Jenner, Carol B.   Wisconsin-Madison
Jensen, J. Granville   Oregon State
Jensen, John R.   Georgia
Jensen, Robert G.   Syracuse
Jett, Stephen C.   Davis
Johannessen, Carl L.   Oregon
Johansen, Harley E.   W. Virginia
Johnsen, Norman C.   SIU-Edwardsville
Johnson, Claude   Riverside
Johnson, Daniel M.   Portland State
Johnson, David C.   SW Louisiana
Johnson, Denis B.   Alberta
Johnson, Donald L.   Illinois
Johnson, Douglas L.   Clark
Johnson, Elias   SW Missouri State
Johnson, Eric S.   Illinois State
Johnson, Gary E.   North Dakota, S. Dakota State
Johnson, J. Peter, Jr.   Carleton
Johnson, James   UCLA
Johnson, Kirsten   Clark
Johnson, Ladd L.   CSU, Chico
Johnson, Lane J.   Temple
Johnson, Morris E.   Utah
Johnson, Peter   Ottawa
Johnson, R.   Waterloo
Johnson, Warren A.   San Diego State
Johnson, William C.   Kansas
Jones, David L.   SIU-Carbondale

Jones, David M.   South Carolina
Jones, David R. W.   Calgary
Jones, Donald W.   Chicago
Jones, J. Richard   Texas
Jones, James I.   Mississippi State
Jopling, Alan V.   Toronto
Jordan, Terry G.   North Texas State
Joseph, Alun E.   Guelph
Joyal, Alfred N.   N. Michigan
Jumper, Sidney R.   Tennessee
Jurdant, Michel   Laval
Justham, Stephen A.   Ball State

Kahn, Alfred   SIU-Edwardsville
Kakiuchi, George H.   Washington
Kalkstein, Laurence S.   Delaware
Kane, Henry E.   Ball State
Kane, Philip S.   CSU, Northridge
Kang, Darshan S.   Montana
Kansky, Karel J.   Pittsburgh
Kapaloski, Lee   Utah
Karan, P. P.   Kentucky
Karaska, Gerald J.   Clark
Kariel, Herbert G.   Calgary
Karinen, Arthur E.   CSU, Chico
Kasperson, Roger E.   Clark
Kates, Robert W.   Clark
Kay, Jeanne   Utah
Kay, Paul A.   Utah
Kaye, B.   Manitoba
Kaye, John M.   Mississippi State
Kayser, Edmond   Ottawa
Keady, Donald M.   Mississippi State
Kearney, Michael S.   Maryland
Kearns, Kevin C.   N. Colorado
Keddie, Philip D.   Guelph
Keen, Elmer A.   San Diego State
Kelley, Philip S.   Mankato State
Kellman, Martin C.   York
Kelly, Kenneth   Guelph
Kennamer, Lorrin G.   Texas
Kennelly, Robert A.   CSU, Hayward
Kenyon, James B.   Georgia
Kerr, Donald   Toronto
Kershaw, Herbert   Oklahoma State
Kesel, Richard H.   Louisiana State
Kesik, Andrzej   Waterloo
Kesseli, John E.   Berkeley
Ketteringham, W. J.   CSU, Fullerton
Kiang, Ying-Cheng   NE Illinois

Kiewiet de Jonge, E. J. C.   San Diego State
Kimber, Clarissa T.   Texas A&M
Kimerling, A. Jon   Oregon State
Kind, Thomas C.   Murray State
King, James W.   Utah
King, Leslie J.   McMaster
King, Paul E.   Columbia
King, R. H.   W. Ontario
Kingsbury, Robert C.   Indiana
Kircher, Harry B.   SIU-Edwardsville
Kirchherr, Eugene C.   W. Michigan
Kirchner, James   Illinois State
Kirchner, John   CSU, Los Angeles
Kirchoff, D. Michael   Syracuse
Kirkeberg, Max C.   San Francisco State
Kish, George   Michigan
Klemas, Vytautas   Delaware
Kline, Hibberd V. B., Jr.   Pittsburgh
Klingensmith, Robert D.   Ohio State
Klink, John C.   Miami-Ohio
Kniffen, Fred B.   Louisiana State
Knight, C. Gregory   Pennsylvania State
Knight, David B.   Carleton
Knos, Duane F.   Clark
Knox, James C.   Wisconsin-Madison
Koelsch, William A.   Clark
Koepke, Robert L.   SIU-Edwardsville
Kohler, Fred E.   W. Illinois
Kolars, John F.   Michigan
Koller, E. Frank   CSU, Fresno
Kollmorgen, Walter M.   Kansas
Kontuly, T. M.   Boston
Kooser, Jaime C.   Washington
Kopec, Richard J.   N. Carolina-Chapel Hill
Kopplin, Bruce E.   Nebraska-Lincoln
Kornhauser, David H.   Hawaii
Koroscil, P. M.   Simon Fraser
Korsok, Albert   Akron
Kosinski, Leszek A.   Alberta
Kostanick, Huey Louis   UCLA
Kostbade, J. Trenton   Missouri-Columbia
Kouba, Leonard J.   N. Illinois
Koutsandreas, John   George Mason
Koutsopoulos, Konstantinos   Iowa
Kovacik, Charles F.   South Carolina
Kracht, James B.   Illinois State
Kramer, Fritz L.   Portland State
Kratzmeier, Walter H.   Towson State
Krausse, Gerald H.   Rhode Island
Kreutzwiser, Reid D.   Guelph
Kriesel, Karl M.   NE Illinois
Kromm, David E.   Kansas State

Krueger, Ralph R. Waterloo
Krumme, Günter Washington
Kruse, Cornelius W. Johns Hopkins
Kubiak, Timothy J. E. Kentucky
Kuchler, A. William Kansas
Kulkarni, Gopal S. Indiana U. of Pa.
Kunstmann, John W. Bowling Green State
Kuntz, Leonard I. Pittsburgh
Kureth, Elwood J. C. E. Michigan
Kurtz, V. E. SW Missouri State
Kus, James S. CSU, Fresno
Kutsche, Katherine L. N. Colorado

Lagarec, Daniel Ottawa
Lahey, James F. Oregon State
Lai, David C. Y. Victoria
Lake, Robert W. Rutgers
Lakshmanan, T. R. Boston
Lall, Amrit Windsor
Lam, Nina S-N. Ohio State
Lamb, Robert B. CSU, Northridge
Lampe, Fred A. SIU-Edwardsville
Lamme, Ary J. III Florida
Landing, James E. Illinois-Chicago Circle
Landis, Glenn S. Dakota State
Landry, Robert J. S. Mississippi
Langdale, John Maryland
Langlois, André Ottawa
Langran, Kenneth J. W. Washington
Lantis, David W. CSU, Chico
Larimore, Ann E. Michigan
Larimore, Philip B. Louisiana State
Larkin, Robert P. Colorado
Larson, Albert J. Illinois-Chicago Circle
Larson, Robert Indiana State
Laswell, Troy J. Mississippi State
Latham, James Florida Atlantic
Latta, Lois Indiana State
LaValle, Placido Windsor
Lawson, Merlin P. Nebraska-Lincoln
Laycock, Arleigh H. Alberta
Leahy, Edward P. E. Carolina
Leahy, Palmyra E. E. Carolina
LeDrew, Ellsworth Waterloo
Lee, Chung-Myun Utah
Lee, David Florida Atlantic
Lee, Mary Ann UCLA
Lee, Robert E. CSU, Fresno
Lee, Russell Iowa
Lee, Tso-Hwa CSU, Fullerton
Lee, Yuk Colorado
Lehrer, Paul L. N. Colorado
Leighly, John B. Berkeley
Leinbach, Thomas R. Kentucky
Lemmon, Robert E. N. Carolina-Charlotte
Lemon, James T. Toronto
Lentnek, Barry SUNY-Buffalo
Letarte, Jacques Laval
Leverenz, Jon Chicago
Lewis, Donald W. Toledo
Lewis, G. K. Boston
Lewis, John E. McGill
Lewis, Laurence A. Clark
Lewis, Lawrence T. W. Illinois
Lewis, Peirce F. Pennsylvania State
Lewis, Richard T. Kent State
Lewis, Robert A. Columbia
Lewthwaite, Gordon R. CSU, Northridge
Ley, David British Columbia
Liaw, Kao-Lee McMaster
Libbee, Michael Oklahoma
Lieber, Stanley R. SIU-Carbondale
Lier, John CSU, Hayward
Limbird, Arthur G. Calgary
Lin, Gong-Yuh CSU, Northridge
Lind, Aulis Vermont
Lindberg, James B. Iowa
Lindquist, Robert C. Florida
Lineback, Neal G. Alabama
Lins, Thomas W. Mississippi State
Little, Richard S. W. Virginia
Liu, Juanita Hawaii
Lloyd, Howell C. Miami-Ohio
Lloyd, Robert E. South Carolina
Lobb, C. Gary CSU, Northridge
Loeffler, M. John Colorado
Loeser, Cornelius J. N. Illinois
Logan, Byron E. Miami-Ohio
Logan, Richard F. UCLA
Lo-Lim, Miriam Kui Kiaw Mankato State
Long, John George Washington
Long, Robert G. Tennessee
Longbrake, David B. Denver
Longwell, A. Richard W. Illinois
Lonsdale, Richard E. Nebraska-Lincoln
Lord, J. Dennis N. Carolina-Charlotte
Lossau, Carl S. SIU-Edwardsville
Louder, Dean Laval
Lounsbury, John F. Arizona State
Louviere, Jordan J. Iowa
Lovell, W. G. Queen's
Lovingood, Paul E. South Carolina

Lowe, John   George Washington
Lowry, Mark II   W. Kentucky
Lowry, William P.   Illinois
Loy, William G.   Oregon
Lozowski, Edward P.   Alberta
Lu, Jonathan J.   Northern Iowa
Lucas, Robert C.   Montana
Luckman, B. H.   W. Ontario
Ludwig, Gail S.   Missouri-Columbia
Luebke, F. C.   Nebraska-Lincoln
Lukermann, Fred E.   Minnesota
Luman, Donald E.   Illinois State
Lundgren, Jan   McGill
Luten, Daniel B.   Berkeley
Lycan, D. R.   Portland State
Lyon, Edward E.   Ball State

Ma, Laurence   Akron
MacDougall, E. Bruce   Massachusetts
MacEachren, Alan M.   VPI&SU
MacIver, Donald   York
MacKay, David B.   Indiana
Mackay, J. Ross   British Columbia
MacKinnon, Ross D.   SUNY-Binghamton
MacMahan, Horace A., Jr.   E. Michigan
MacPherson, A.   Simon Fraser
Macpherson, Alan G.   Memorial
Macpherson, Joyce Brown   Memorial
Mage, Julius A.   Guelph
Mahoney, William C.   York
Major, David C.   Clark
Malecki, Edward J., Jr.   Oklahoma
Mancell, Robert B.   E. Michigan
Manners, Ian R.   Texas
Mannion, John J.   Memorial
Manson, Gary A.   Michigan State
Mantei, Erwin   SW Missouri State
Maraffa, Thomas A.   VPI&SU
Marasciulo, Edward   George Washington
Marble, Duane F.   SUNY-Buffalo
Marchioni, Michael P.   E. Tennessee
Marcus, Melvin G.   Arizona State
Marcus, Robert B.   Florida
Maresh, Thomas J.   Oregon State
Marionneaux, Ronald L.   E. Kentucky
Mark, D. M.   W. Ontario
Markham, Charles G.   CSU, Fresno
Marlow, Loran D.   SIU-Edwardsville
Marotz, Glen A.   Kansas
Marr, Paul D.   SUNY-Albany
Marriott, Robert   Towson State
Marshall, John U.   York
Martin, Curtis V.   Towson State
Martin, David L.   N. Carolina-Charlotte
Martin, Gene E.   CSU, Chico
Martin, Walter E.   N. Carolina-Charlotte
Martinko, Edward A.   Kansas
Martinson, Tom L.   Ball State
Martis, Kenneth C.   W. Virginia
Marts, Marion E.   Washington
Massam, Bryan H.   York
Mastran, Shelley   George Washington
Mather, E. Cotton   Kentucky, Minnesota, Hawaii
Mather, John R.   Delaware
Matley, Ian M.   Michigan State
Matson, John T.   Memphis State
Matthai, James P.   Murray State
Matthews, B.   Waterloo
Matthews, O. Paul   Idaho
Mattingly, Paul F.   Illinois State
Matzke, Gordon E.   Oregon State
Mausel, Paul   Indiana State
Maxfield, Donald W.   N. Illinois
Maxfield, O. Orland   Arkansas
Maxwell, Gayle   Oklahoma State
May, Joseph A.   Toronto
Mayer, Harold M.   Wisconsin-Milwaukee
Mayer, Jonathan   Washington
Mayfield, R. C.   Boston
Mazzucchelli, Vincent   CSU, Los Angeles
McArthur, David S.   San Diego State
McBoyle, Geoffrey R.   Waterloo
McCann, S. Brian   McMaster
McCaughey, J. H.   Queen's
McCleary, George F., Jr.   Kansas
McColl, Robert W.   Kansas
McConnell, Harold   Florida State
McConnell, J. G.   Saskatchewan
McConnell, James E.   SUNY-Buffalo
McCoy, Roger M.   Utah
McCune, Shannon   Florida
McDaniel, R.   W. Ontario
McDermott, Paul D.   George Mason
McDonald, James R.   E. Michigan
McDowell, P. F.   Boston
McGee, T. G.   British Columbia
McGrath, G.   Queen's
McGregor, John R.   Indiana State
McIlwraith, Thomas F.   Toronto
McInnis, Donald   SW Missouri State
McIntire, Elliot G.   CSU, Northridge

McIntire, William G. Louisiana State
McIntosh, C. Barron Nebraska-Lincoln
McIntyre, Michael P. San José State
McKay, Ian A. Wilfrid Laurier
McKee, Jesse O. S. Mississippi
McKim, Wayne L. Towson State
McKnight, Tom L. UCLA
McLafferty, Sara L. Columbia
McLellan, Alexander G. Waterloo
McLennan, Marshall S. E. Michigan
McMurry, John H. Wilfrid Laurier
McNee, Robert B. Cincinnati
McNeill, Allen Massachusetts
McNulty, Michael L. Iowa
McPherson, Harold J. Alberta
McQuillan, Aidan Toronto
McTaggart, W. Donald Arizona State
Meade, Melinda S. N. Carolina-Chapel Hill
Mealor, W. Theodore, Jr. Memphis State
Mednis, Roberts J. Memorial
Meeks, Harold A. Vermont
Meentemeyer, Vernon G. Georgia
Mehretu, Assefa Michigan State
Meierding, Thomas C. Delaware
Meihoefer, Hans-J. San Francisco State
Meinig, Donald W. Syracuse
Mendelson, Robert E. SIU-Edwardsville
Meneley, G. Joseph N. Carolina-Chapel Hill
Mercer, John Syracuse
Meredith, Thomas McGill
Merrens, H. Roy York
Merrill, David A. Illinois-Chicago Circle
Merrill, Gordon C. Carleton
Mesinger, Jonathan S. Cincinnati
Messenger, A. Steven N. Illinois
Meuter, Ralph F. CSU, Chico
Meyer, David R. Massachusetts
Mia, M. Mohiuddin Hawaii
Michel, Aloys A. Rhode Island
Micklewright, Malcolm A. Victoria
Micklin, Philip P. W. Michigan
Mieczkowski, Z. Manitoba
Mihalyi, Louis J. CSU, Chico
Mikesell, Marvin W. Chicago
Miles, Edward J. Vermont
Millard, William NE Illinois
Miller, David H. Wisconsin-Milwaukee
Miller, E. Joan Illinois State
Miller, E. Willard Pennsylvania State
Miller, Halsey W. SIU-Edwardsville
Miller, James SW Missouri State
Miller, Roger P. Minnesota
Miller, Theodore K. Indiana
Miller, Victor C. Indiana State
Miller, Vincent P. Indiana U. of Pa.
Milton, J. D. Manitoba
Minghi, Julian V. South Carolina
Mings, Robert C. Arizona State
Minkel, Clarence W. Tennessee
Minnich, Richard A. Riverside
Miron, John Toronto
Missavage, Joseph M. SUNY-Binghamton
Mitchell, Bruce Waterloo
Mitchell, J. Kenneth Rutgers
Mitchell, Lisle S. South Carolina
Mitchell, Richard A. SUNY-Buffalo
Mitchell, Robert D. Maryland
Mitchelson, Ronald L. Georgia
Moeglin, Thomas SW Missouri State
Moellering, Harold Ohio State
Mogolesko, F. J. Boston
Momsen, Richard P., Jr. Calgary
Monahan, Robert L. W. Washington
Monmonier, Mark S. Syracuse
Monsebroten, Dale R. E. Kentucky
Montgomery, Richard C. CSU, Fresno
Montz, Burrell SUNY-Binghamton
Moodie, D. W. Manitoba
Mookherjee, Debnath W. Washington
Moore, Conrad T. Arizona
Moore, Donald G. S. Dakota State
Moore, E. G. Queen's
Moore, T. R. McGill
Moore, Tyrel G. W. Kentucky
Morain, Stanley A. New Mexico
Morgan, Donald L. CSU, Fresno
Morgan, Joseph R. Hawaii
Moriarty, Barry N. Carolina-Chapel Hill
Morin, Denis Sherbrooke
Morissonneau, Christian Laval
Morley, C. David York
Morrill, Richard L. Washington
Morrill, Robert W. VPI&SU
Morrison, Joel L. Wisconsin-Madison
Morrow-Jones, Hazel Colorado
Morse, Edwin Illinois State
Moss, Michael R. Guelph
Mouat, David A. Arizona
Moulton, Benjamin Indiana State
Moulton, Gary E. Nebraska-Lincoln
Mower, Roland D. North Dakota
Mrowka, Jack P. Oregon
Muckleston, Keith W. Oregon State

Muehrcke, Phillip C.	Wisconsin-Madison
Muhr, John	Chicago State
Muhs, Daniel R.	Wisconsin-Madison
Mulamoottil, George	Waterloo
Mulhauser, John	Akron
Muller, Jean-Claude	Alberta
Muller, Peter O.	Miami
Muller, Robert A.	Louisiana State
Müller-Wille, Christopher	Texas
Müller-Wille, L.	McGill
Mulligan, Gordon F.	Arizona
Mullner, Ross M.	Illinois-Chicago Circle
Muncaster, Russell W.	Wilfrid Laurier
Munski, Douglas C.	North Dakota
Muraco, William A.	Toledo
Murdie, Robert A.	York
Murphey, Rhoads	Michigan
Murphy, Peter E.	Victoria
Murphy, Raymond E.	Clark
Murphy, Richard E.	New Mexico
Murray, Malcolm A.	Georgia State
Murton, Brian J.	Hawaii
Muschett, F. Douglas	Syracuse
Myers, Merle W.	Mississippi State
Myers, Theodore C.	Colorado
Myles, Edward L.	CSU, Chico

Nadeau, Roger	Sherbrooke
Nanji, Razia	Oklahoma State
Nash, Peter H.	Waterloo
Nash, Thomas	Akron
Nasse, George N.	CSU, Fresno
Nasuti, James	Texas
Naughton, Patrick W.	Hawaii
Nazzaro, Andrew A.	E. Michigan
Neel, Earl M.	Arkansas
Nellis, M. Duane	Kansas State
Nelson, Howard J.	UCLA
Nelson, J. G.	Waterloo
Nelson, Robert	Illinois State
Nelson, Ronald E.	W. Illinois
Neuman, Robert W.	Louisiana State
Newcomb, Robert M.	CSU, Northridge
Newman, James L.	Syracuse
Newton, Milton B.	Louisiana State
Nicholas, Frank	Mankato State
Nichols, John	Alabama
Nicholson, N.L.	W. Ontario
Nicholson, Sharon	Clark
Nickling, William G.	Guelph
Niddrie, David L.	Florida
Nieswand, George A.	Rutgers
Nietschmann, Bernard Q.	Berkeley
Nijim, Basheer K.	Northern Iowa
Nishi, Midori	CSU, Los Angeles
Nixon, Dennis W.	Rhode Island
Nkemdirim, L. C.	Calgary
Noble, Allen G.	Akron
Noble, William A.	*Missouri-Columbia*
Nolan, Mary Lee	Oregon State
Norcliffe, Glen B.	York
Nordstrom, Karl F.	Rutgers
Norris, Robert E.	Oklahoma State
Norsworthy, Stanley F.	CSU, Fresno
North, Margaret E. A.	British Columbia
North, Robert N.	British Columbia
Northam, Ray M.	Oregon State
Norton, W.	Manitoba
Nostrand, Richard L.	Oklahoma
Nowak, W. Stan.	Memorial
Nunley, Robert E.	Kansas
Nunnally, Nelson	N. Carolina-Charlotte
Nystrom J. Warren	Miami
Nystuen, John D.	Michigan

Oberlander, Theodore M.	Berkeley
O'Brien, Bob R.	San Diego State
Odland, John	Indiana
Officer, E. Roy	Waterloo
Ogden, Lawrence	E. Michigan
Ojala, Carl F.	E. Michigan
Oke, T. R.	British Columbia
O'Keefe, Philip	Clark
Oldham, Charles C.	SW Louisiana
Oliver, John E.	Indiana State
Olmstead, Clarence W.	Wisconsin-Madison
O'Loughlin, John V.	Illinois
Olsen, Lola M.	N. Carolina-Charlotte
Olson, J. M.	Boston
Olson, Sherry	McGill
Olsson, Carl N.	Florida
Olyphant, Greg	Indiana
Onesti, Lawrence	Indiana
Ongley, E. D.	Queen's
Opheim, Lee A.	S. Dakota State
Orme, Antony R.	UCLA
Ormrod, Richard K.	N. Colorado
Orr, Douglas M., Jr.	N. Carolina-Charlotte
Orr, R. William	Ball State
Osborne, B. S.	Queen's
Osleeb, J.	Boston

Ostergren, Robert C. Wisconsin-Madison
Ostresh, Lawrence M. Wyoming
O'Sullivan, Patrick Florida State
Outcalt, Samuel I. Michigan
Outen, Donald Towson State
Owen, Donald E. Indiana State
Owsley, Douglas W. Louisiana State

Packer, R. W. W. Ontario
Padick, Clement CSU, Los Angeles
Paganini, Louis A. Florida
Pagenhart, Thomas H. CSU, Hayward
Palm, Risa I. Colorado
Paludan, Charles T. Tennessee
Pannell, Clifton W. Georgia
Papageorgiou, George McMaster
Paquette, Romain Sherbrooke
Parella, Katherine A. Clark
Park, Siyoung W. Illinois
Parker, Albert J. Georgia
Parker, L. Mayland Arizona State
Parkhurst, David F. Indiana
Parkhurst, Judith I. Wayne State
Parry, John T. McGill
Parson, Helen E. Wilfrid Laurier
Parsons, James J. Berkeley
Pasqualetti, Martin J. Arizona State
Patrick, Larry L. Texas
Patten, George P. Ohio State
Patterson, James E. Illinois State
Pattison, William D. Chicago
Patton, Clyde P. Oregon
Patton, Donald J. Florida State
Paul, Alexander H. Regina
Pawling, John W. Temple
Payne, James E. Indiana U. of Pa.
Payne, Roger L. George Mason
Peake, Jeffrey S. Nebraska-Omaha
Pearson, Karen S. Nebraska-Lincoln
Pearson, Ross N. E. Michigan
Pease, James R. Oregon State
Pease, Robert Riverside
Pease, Steven R. San Francisco State
Pederson, Eldor George Washington
Pederson, Leland R. Arizona
Peet, J. Richard Clark
Pennington, Campbell W. Texas A&M
Peplies, Robert W. E. Tennessee
Perin, Charles George Washingon
Peruzzi, Duilio San José State

Peters, Bernard C. N. Michigan
Petersen, Albert J. W. Kentucky
Petersen, Ralph A. N. Illinois
Peterson, Gilbert A. W. Washington
Peterson, Raymond A. Ball State
Petterson, Janet H. E. Carolina
Petzold, Donald Maryland
Peucker, T. K. Simon Fraser
Philbrick, A. K. W. Ontario
Phillips, Deborah Akron
Phipps, A. G. Saskatchewan
Phipps, Michel Ottawa
Pickard, Claude E. W. Kentucky
Pickard, Jerome George Washington
Picker, Robert D. San Francisco State
Pierce, J. T. Simon Fraser
Pierce, Walter H. Ball State
Pigozzi, Bruce W. Michigan State
Piianaia, Abraham Hawaii
Pillsbury, Richard Georgia State
Pinther, Miklos Columbia
Pipkin, John S. SUNY-Albany
Pirie, Peter N. D. Hawaii
Pirkle, Earl C. Florida
Pitts, Forrest R. Hawaii
Place, Richard F. SUNY-Binghamton
Plane, David A. Arizona
Platt, Rutherford H. Massachusetts
Pleva, E. G. W. Ontario
Poole, Donald H. E. Tennessee
Popenoe, Hugh L. Florida
Porteous, J. Douglas Victoria
Porter, Philip W. Minnesota
Poulin, Andre Sherbrooke
Pouliot, Marcel Sherbrooke
Poulsen, Thomas M. Portland State
Powell, Douglas R. Berkeley
Pred, Allan R. Berkeley
Preston, Richard E. Waterloo
Preston, Valerie A. Kansas
Price, Edward T. Oregon
Price, Larry W. Portland State
Prudhomme, Claire McGill
Prunty, Merle C. Georgia
Pryde, Philip R. San Diego State
Psuty, Norbert P. Rutgers
Purvis, John C. South Carolina
Puzo, Bill CSU, Fullerton
Pyle, Gerald F. N. Carolina-Charlotte

Quandt, Eldor C.   W. Michigan
Quastler, Imre E.   San Diego State
Quick, Horace F.   Colorado
Quillen, Dennis E.   E. Kentucky
Quinn, Mary L.   Nebraska-Lincoln
Qutub, Musa   NE Illinois

Raby, Stewart B.   Carleton
Radell, David   CSU, Los Angeles
Radford, John P.   York
Rafferty, Milton   SW Missouri State
Rains, R. Bruce   Alberta
Raitz, Karl B.   Kentucky
Rajagopal, R.   Iowa
Ralston, Bruce A.   Tennessee
Ralston, Janet I.   Tennessee
Ramseier, R. O.   Carleton
Randolph, James C.   Indiana
Raney, Franklin C.   W. Washington
Ransome, Jack   Windsor
Raphael, C. Nicholas   E. Michigan
Rathburn, Robert R.   Louisiana State
Ratick, S. J.   Boston
Rau, Herbert L., Jr.   Chicago State
Rauch, Henry   W. Virginia
Raup, Hallock F.   Kent State
Raup, Henry A.   W. Michigan
Raveneau, Jean   Laval
Ray, Arthur J.   York
Ray, D. Michael   Carleton
Rayner, John N.   Ohio State
Reed, Robert R.   Berkeley
Reeds, Lloyd G.   McMaster
Rees, John   CSU, Los Angeles
Rees, Peter W.   Delaware
Rees, R.   Saskatchewan
Reeves, Richard W.   Arizona
Reeves, Robert G.   S. Dakota State
Rehder, John B.   Tennessee
Reider, Richard G.   Wyoming
Reilly, Timothy F.   SW Louisiana
Reiman, Robert E.   Appalachian State
Reinelt, Erhard R.   Alberta
Reitan, Clayton H.   N. Illinois
Reith, Gertrude M.   CSU, Fullerton
Relph, Edward C.   Toronto
Rengert, George F.   Temple
Renwick, William H.   Rutgers
Retallick, Harold J.   Nebraska-Omaha
ReVelle, Charles   Johns Hopkins

Reynolds, David R.   Iowa
Rheault, Michel   Sherbrooke
Rheumer, G. A.   Simon Fraser
Rhynsburger, W.   Portland State
Rice, John G.   Minnesota
Richards, J. H.   Saskatchewan
Richardson, Bonham C.   VPI&SU
Richardson, Miles R.   Louisiana State
Richetto, Jeffrey   Alabama
Ridd, Merrill K.   Utah
Riddell, J. B.   Queen's
Rieck, Richard L.   W. Illinois
Riggs, Karl A.   Mississippi State
Rinier, James A.   Kent State
Ritchot, Gilles   Laval
Roberge, Roger   Ottawa
Roberts, Charles F.   George Mason
Roberts, Larry D.   S. Dakota State
Roberts, Leonidas H.   Florida
Roberts, M. C.   Simon Fraser
Roberts, William M.   S. Mississippi
Robinson, Arthur H.   Wisconsin-Madison
Robinson, David J.   Syracuse
Robinson, J. Lewis   British Columbia
Robinson, Peter J.   N. Carolina-Chapel Hill
Roder, Wolf   Cincinnati
Rodgers, Allan L.   Pennsylvania State
Roepke, Harlan H.   Ball State
Roepke, Howard G.   Illinois
Rogers, Garry F.   Columbia
Rogers, Jeffery C.   Ohio State
Rogerson, Robert J.   Memorial
Rogge, J. R.   Manitoba
Roine, Jarl   N. Michigan
Romanowski, J. I.   Manitoba
Romsa, Gerald   Windsor
Rooney, John F., Jr.   Oklahoma State
Rorabacher, John A.   S. Dakota State
Roscoe, Donald   Mankato State
Rose, Harold M.   Wisconsin-Milwaukee
Roseman, Curtis C.   Illinois
Rosenfeld, Charles L.   Oregon State
Rosenthal, Gerson M., Jr.   Chicago
Rosenvall, Lynn A.   Calgary
Ross, William M.   Victoria
Roth, Irvin   Chicago State
Rouffignat, Joël   Laval
Roundy, Robert W.   Rutgers
Rouse, Wayne R.   McMaster
Rowles, Graham   W. Virginia
Rowles, Ruth Anderson   W. Virginia
Rowntree, Lester B.   San José State

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Rowntree, Rowan A. Syracuse
Roy, Jean-Marie Sherbrooke
Rubenstein, James M. Miami-Ohio
Rudd, Robert D. Denver
Rudzitis, Gundars Texas
Rugg, Dean S. Nebraska-Lincoln
Ruggles, R. I. Queen's
Rundquist, Donald C. Nebraska-Omaha, Lincoln
Rushton, Gerard Iowa
Russell, Ernest E. Mississippi State
Russwurm, Lorne H. Waterloo
Rutherford, G. K. Queen's
Ryan, Carolyn J. Temple
Ryan, K. Bruce Cincinnati
Ryerson, Charles C. Vermont

Saarinen, Thomas F. Arizona
Sack, Robert D. Wisconsin-Madison
Sagar, R. B. Simon Fraser
Sahir, Abul H. Regina
St. Arnaud, R. O. Saskatchewan
St-Onge, Denis Ottawa
Saint-Yves, Maurice Laval
Sale, Randall D. Wisconsin-Madison
Salisbury, Neil E. Oklahoma
Salter, Christopher L. UCLA
Samuels, Marwyn British Columbia
Samuelson, Alan C. Ball State
Samuelson, Maynard L. S. Dakota State
Sanders, Ralph A. Syracuse
Sanderson, Marie Windsor
Sandness, Roger K. S. Dakota State
Sanger, Chesley W. Memorial
Sargent, Charles S., Jr. Arizona State
Sas, Anthony South Carolina
Sauer, Jonathan D. UCLA
Saunderson, Houston C. Wilfrid Laurier
Sawatzky, H. L. Manitoba
Sawyer, Stephen W. Maryland
Scarlett, Maurice J. Memorial
Schaeper, Herbert R. A. Florida
Schlichtmann, Hans G. Regina
Schmidt, C. Gilbert Colorado
Schmidt, Else T. A. Illinois State
Schmidt, Oswald Pittsburgh
Schmudde, Theodore H. Tennessee
Schoen, Meera Ball State
Schoolmaster, F. Andrew III North Texas State
Schroeder, Walter A. Missouri-Columbia
Schul, Norman W. N. Carolina-Charlotte
Schuler, Harry J. Utah, Irvine
Schultz, Ronald Florida Atlantic
Schwartzberg, Joseph E. Minnesota
Schwarz, David E. San José State
Schwarz, Harry E. Clark
Schwendeman, Joseph R., Jr. E. Kentucky
Schwind, Paul J. Hawaii
Scott, Allen J. Toronto, UCLA
Scott, Earl P. Minnesota
Scott, James W. W. Washington
Scott, Ralph C. Towson State
Scott, Steven L. N. Colorado
Scott, Thomas W. Arkansas
Scripter, Sam M. W. Idaho
Seaborne, Adrian A. Regina
Seamon, David R. Oklahoma
Searight, Thomas Illinois State
Searl, Gary H. Oregon
Seawall, Frank CSU, Chico
Seifried, Neil R. M. Alberta
Seldin, Daniel Indiana
Self, Burl E., Jr. SW Missouri State
Self, Huber Kansas State
Selya, Roger M. Cincinnati
Semple, R. Keith Ohio State
Sewell, W. R. Derrick Victoria
Seyler, H. L. Kansas State
Shabad, Theodore Columbia
Shaklee, Ronald SW Missouri State
Shannon, Gary Florida, Kentucky
Sharpe, Christopher Memorial
Sharpe, David M. SIU-Carbondale
Shaudys, Vincent K. CSU, Hayward
Shaw, John Alberta
Shea, Philip E. Carolina
Shedden, Alastair New Mexico
Shelton, Marlyn L. Davis
Sheppard, Eric S. Minnesota
Sherman, John C. Washington, Hawaii
Sheskin, Ira M. Miami
Shimkin, Demitri B. Illinois
Shirey, Ruth Indiana U. of Pa.
Shortridge, James Kansas
Showalter, Gerald R. Ball State
Shrestha, Mohan N. Bowling Green State
Shroder, John F., Jr. Nebraska-Omaha, Lincoln
Shuman, Stanley B. Illinois State
Siddall, William R. Kansas State
Siddiqi, Akhtar Indiana State

Siemens, Alfred H.   British Columbia
Silberfein, Marilyn   Temple
Silvernail, Richard G.   South Carolina
Simkins, Paul D.   Pennsylvania State
Simmons, James W.   Toronto
Simonett, David S.   Santa Barbara
Simoons, Frederick J.   Davis
Simpson, Jefferson L.   N. Carolina-Charlotte
Sims, John H.   SIU-Carbondale
Sinclair, Robert   Wayne State
Siniard, L. Arnold   Memphis State
Sitwell, O. F. George   Alberta
Skaggs, Richard H.   Minnesota
Slaymaker, H. O.   British Columbia
Slocum, Terry A.   Maryland
Slorp, Lee H.   Miami-Ohio
Slusser, William F.   CSU, Fresno
Smerk, George M.   Indiana
Smil, V.   Manitoba
Smit, Barry E.   Guelph
Smith, Albert W.   Colorado
Smith, Bruce W.   Bowling Green State
Smith, Christopher J.   Oklahoma, SUNY-Albany
Smith, David A.   SUNY-Buffalo
Smith, Derald G.   Calgary
Smith, Everett G.   Oregon
Smith, G. C.   Manitoba
Smith, Kirk R.   Hawaii
Smith, Leland F.   Arizona
Smith, M. W.   Carleton
Smith, Peter J.   Alberta
Smith, R. H. T.   British Columbia
Smith, Richard G.   W. Washington
Smith, Richard M.   Michigan State
Smith, Richard V.   Miami-Ohio
Smith, Robert   George Mason
Smith, S. Ivan   Alberta
Smith, Samuel W.   Indiana State
Smith, Terence R.   Santa Barbara
Smith, Thomas R.   Kansas
Smith, W. Randy   Ohio State
Smole, William J.   Pittsburgh
Snead, Rodman E.   New Mexico
Sobol, John A.   Memphis State
Solzman, David M.   Illinois-Chicago Circle
Sommers, Lawrence M.   Michigan State
Sonnenfeld, Joseph   Texas A&M
Sõõt, Siim   Illinois-Chicago Circle
Sopher, David E.   Syracuse
Sorenson, Curtis J.   Kansas
South, Robert B.   Cincinnati
Southworth, Frank   Illinois
Spector, A. N.   Queen's
Spelt, Jacob   Toronto
Spence, Edward S.   York
Spinelli, Joseph G.   Bowling Green State
Spurlock, Carl W.   Florida, E. Kentucky
Squires, Roderick H.   Minnesota
Srivastava, Harishankar   Ottawa
Stadler, Stephen J.   Oklahoma State
Stafford, Howard A.   Cincinnati
Stager, J. K.   British Columbia
Stallings, Emmett F.   SW Louisiana
Stanek, Oleg   Sherbrooke
Stanislawski, Dan   Arizona
Stankey, George H.   Montana
Stanley, Raymond W.   San José State
Stanley, William R.   South Carolina
Stapleton, Clare   Wisconsin-Madison
Staveley, Michael   Memorial
Staver, Allen E.   N. Illinois
Stebelsky, Ihor   Windsor
Steed, Guy   Ottawa
Steila, Donald   E. Carolina
Steinke, Theodore R.   South Carolina
Stene, L. P.   Manitoba
Stephens, John D.   UCLA
Stephenson, Richard A.   E. Carolina
Sterling, Henry S.   Wisconsin-Madison
Sternberg, Hilgard O'Reilly   Berkeley
Stetzer, Frank C.   Ohio State
Stevens, Richard E.   Colorado
Stevenson, Marshall L.   Towson State
Steward, Harry   Clark
Stewart, Norman R.   Wisconsin-Milwaukee
Steyn, D.   British Columbia
Stillwell, H. Daniel   Appalachian State
Stine, James H.   Oklahoma State
Stoddard, Robert H.   Nebraska-Lincoln
Stoltman, Joseph P.   W. Michigan
Stoops, George   Mankato State
Stopp, G. Harry   George Mason
Storey, Keith J.   Memorial
Stout, Chester T.   E. Tennessee
Stoveken, Ruth   Wisconsin-Milwaukee
Stover, Stephen L.   Kansas State
Strahler, Alan H.   Santa Barbara
Street, John M.   Hawaii
Strohmeyer, Donald   SIU-Edwardsville
Stuart, Alfred W.   N. Carolina-Charlotte
Stuart, Merrill M.   CSU, Fresno
Stutz, Frederick P.   San Diego State
Subins, Gunars   Wilfrid Laurier

Sublett, Michael D. Illinois State
Suckling, Philip W. Georgia
Sullivan, Michael E. Ball State
Summers, William F. Memorial
Sutherland, Stephen M. Oklahoma
Sutton, Imre CSU, Fullerton
Swann, Michael M. Nebraska-Lincoln
Swartz, Robert D. Wayne State
Swenson, Russell G. W. Illinois
Szeicz, Geza Toronto

Taaffe, Edward J. Ohio State
Taaffe, Robert N. Indiana
Taketa, Richard A. Michigan
Takizawa, Bill W. San José State
Tally, Taz N. Carolina-Charlotte
Tan, Kok-Chiang Guelph
Tata, Robert Florida Atlantic
Taube, Sten A. N. Michigan
Taylor, A. M. Queen's
Taylor, Alfred George Mason
Taylor, D. R. F. Carleton
Taylor, Gordon D. Carleton
Taylor, H. W. W. Ontario
Taylor, James W. W. Kentucky
Taylor, S. Martin McMaster
Tepper, Leonard P. Indiana U. of Pa.
Terich, Thomas A. W. Washington
Terjung, Werner H. UCLA
Teshera, Robert W. W. Washington
Theriault, Marius Laval
Thoman, Richard S. CSU, Hayward
Thomas, Bradford L. Kent State
Thomas, Edwin H. Illinois-Chicago Circle
Thomas, Jean-Claude George Mason
Thomas, Morgan D. Washington
Thomas, Robert N. Michigan State
Thomas, William L. CSU, Hayward
Thompson, Bryan Wayne State
Thompson, Derek Maryland
Thompson, Gary L. Oklahoma
Thompson, John Illinois
Thompson, John H. Syracuse
Thompson, John L. Miami-Ohio
Thompson, Kenneth Davis
Thompson, Noble R. SIU-Edwardsville
Thomson, Kenneth SW Missouri State
Thorn, Colin E. Illinois
Thornton, Charles A. SIU-Edwardsville
Thrall, Grant SUNY-Buffalo
Thrower, Norman J. W. UCLA
Thurston, David L. Mankato State
Thyagarajan, Sambamurthy SUNY-Albany
Tiedemann, Clifford E. Illinois-Chicago Circle
Timofeeff, Nicolay SUNY-Binghamton
Tinline, R. R. Queen's
Tirtha, Ranjit E. Michigan
Tiwari, R. C. Manitoba
Tobin, Graham A. Iowa
Tobler, Waldo R. Santa Barbara
Todd, D. Manitoba
Tong, E. Boston
Topp, G. Clarke Carleton
Torrance, J. Kenneth Carleton
Towle, Jerry C. CSU, Fresno
Toy, Terrence J. Denver
Traylor, Charles T. Memphis State
Treichel, Georg San Francisco State
Tremblay, Germain Laval
Trenhaile, Alan Windsor
Trewartha, Glenn T. Wisconsin-Madison
Trimble, Stanley W. UCLA
Trotier, Louis Laval
Trott, Charles E. N. Illinois
Trotter, John E. Illinois State
Troughton, M. J. W. Ontario
True, Philip George Washington
Trussell, Margaret E. CSU, Chico
Trussler, Susan Michigan
Tuan, Yi-Fu Minnesota
Tuller, Stanton E. Victoria
Tunbridge, John E. Carleton
Turner, Billie L. II Clark
Turner, Daniel S. E. Michigan
Turner, Eugene J. CSU, Northridge
Turner, Helen Memphis State
Tweedie, Steven W. Oklahoma State

Ulack, Richard Kentucky
Ulrich, Roger S. Delaware
Urell, Joseph T. Miami-Ohio
Urquhart, Alvin W. Oregon
Utano, Jack Akron

Vale, Thomas R. Wisconsin-Madison
Vance, James E., Jr. Berkeley
Vance, Jean San Francisco State

Vandall, Paul	Windsor
van der Eyk, J. J.	Toronto
Vanderhill, Burke G.	Florida State
VanderMeer, Canute	Vermont
Vander Meer, Paul	CSU, Fresno
van Doorninck, Frederick, Jr.	Texas A&M
Vann, John H.	CSU, Hayward
Van Riper, Joseph E.	SUNY-Binghamton
Vayda, Andrew P.	Rutgers
Velikonja, Joseph	Washington
Vermeer, Donald E.	Louisiana State
Vernon, Manfred C.	W. Washington
Vicero, Ralph D.	CSU, Northridge
Vill, Martha	Maryland
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Waddell, Eric	Laval
Wagner, Kenneth C.	S. Mississippi
Wagner, P. L.	Simon Fraser
Walcott, Wayne A.	N. Carolina-Charlotte
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Walker, Gerald E.	York
Walker, H. J.	Louisiana State
Walker, Richard A.	Berkeley
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Wallace, A. Iain	Carleton
Walsh, Stephen J.	Oklahoma State
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West, Robert C.	Louisiana State
Wester, Lyndon L.	Hawaii
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Westfall, John E.	San Francisco State
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Whebell, C. F. J.	W. Ontario
Wheeler, David L.	Ball State
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White, Gilbert F.	Colorado
White, Kenneth L.	Texas A&M
White, Rodney R.	Toronto
White, Roger W.	Memorial
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Whitney, Joseph B. R.	Toronto
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Wiedel, Joseph W.	Maryland
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Wilhelm, Hubert G. H.	Ohio
Wilkie, Richard W.	Massachusetts
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Williams, Jack Michigan State
Williams, Jerry L. New Mexico
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Williams, Lynden S. Ohio
Williams, Peter J. Carleton
Williams, T. H. Lee Kansas
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Wills, Bernt L. North Dakota
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Wilner, Arthur S. Dakota State
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Wilson, J. W. Simon Fraser
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Wilson, Paul B. Montana
Wilson, Robert T. W. Illinois
Winberry, John J. South Carolina
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Winsor, Roger A. Appalachian State
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Wyatt, Robert L. E. Tennessee
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Wynn, Graeme British Columbia

Yahr, Charles C. San Diego State
Yapa, Lakshman Pennsylvania State
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Yasso, Warren E. Columbia
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Young, Cyrus W. Miami-Ohio
Young, Robert A. CSU, Fullerton
Young, William J. Temple
Youngmann, Carl Washington
Yoxall, William H. Memorial

Zacur, Maurice M. Indiana U. of Pa.
Zelinsky, Wilbur Pennsylvania State, Maryland
Ziehr, Charles E. Carolina
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- California State University, Long Beach
- * University of California, Irvine

CONNECTICUT
- Central Connecticut State College
- Southern Connecticut State College

FLORIDA
- University of South Florida

ILLINOIS
- Roosevelt University

LOUISIANA
- Northeast Louisiana University

MASSACHUSETTS
- Boston State College
- Bridgewater State College
- * Harvard University

MINNESOTA
- Bemidji State University
- St. Cloud State University

NEVADA
- University of Nevada-Reno

NEW JERSEY
- Montclair State College
- Trenton State College
- William Paterson College

OREGON
- Oregon College of Education

PENNSYLVANIA
- Bloomsburg State College
- California State College
- West Chester State College

TENNESSEE
- Middle Tennessee State University

TEXAS
- East Texas State University

UTAH
- Brigham Young University

WEST VIRGINIA
- Marshall University

CANADA, QUEBEC
- University of Montreal